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Editorial:
Complishing the First Year for Higher Education Governance and Policy

Exchange of information between among scholars, policy makers and practitioners of higher education in different country contexts contribute to the reinforcement of higher education systems of individual countries. One of the aims of Higher Education Governance and Policy (HEGP) is to facilitate such a scholarly dialogue among higher education researchers, policy makers and administrators around the world. In the second issue of the first volume HEGP introduces five articles which address different issues surrounding higher education systems.

The first article of the second issue entitled as "Engineering graduates in India: determinants of their employment and earnings" by Tilak examined the determinants of employment probabilities of engineering graduates and determinants of their earnings in India. The results of the analysis indicate that education and related factors are the main predictors of employment of engineering graduates. However, education related factors, job related factors and gender determine the earnings of the engineering graduates. The results of the study provide important insights for employment and earnings of engineering graduates.

The second article of the issue entitled as "South Africa as a geopolitical hub for migration and international student mobility" by Sehoole and Lee discusses the phenomenon of regional hub and the underlying causes of regional hub position of South Africa for student mobility in the Sub-Saharan region. The article shows that there is a convergence between the cases of South-Africa and other regional hubs of international student mobility. However, the article documents some divergent reasons in regional hub position of South-Africa compared to other regional hubs in other continents.

The third article entitled as "Trends in governance and management of the Malaysian academic profession (2007-2013): evolution or devolution?" by Azman analyses the academics' role in the governance of the Malaysian higher education system over a period of five years with the aim of providing a perspective of how Malaysian academics perceive the governance and management practices in their institutions. Based on the data collected within the framework of Changing Academic Profession (CAP) in 2007 and 2013, the study documented that academics exercise different patterns of shared governance on different issues (e.g., personnel, regulation of academic work, institutional policies) at different levels. The academics find themselves uninfluential in determining institutional policies at the school/faculty and institutional levels. As in the case of many other countries, the authority to determine institutional policies, appointment of top management and formation to upper bodies is cumulated in the hands of top management in the Malaysian higher education system.

The fourth article entitled as "Quality of work life, work life balance and career satisfaction: faculty perceptions" by Arif and Ikbal examined the quality of work life (QWL) in higher education in Pakistan. The study investigated the relationship between QWL attributes, work-life balance (WLB), and career satisfaction (CS). The results depicted that WLB strongly predicts career satisfaction. However, perceptions of inequality regarding faculty promotions, workload distribution, and allocated work hours affected QWL negatively. The results are instrumental for academic leadership in assisting their academics for ensuring quality work-life accomplish satisfaction and commitment of their academic staff members.

The final article of this issue entitled as "The emergence of the new Mexican academic meritocracy" by Galaz Fontes discusses the role of National Researchers System (SNI) in Mexica in structuring the

academic profession in the country and the emergence of academic meritocracy in the country. Fontes argued that academic meritocracy should be built not only on SNI but on the diversity which characterizes the Mexican academic profession.

Hopefully the articles of this issue will facilitate exchange of ideas and practices among higher education scholars and policy makers around the world.

Yasar Kondakci
Editor

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Engineering Graduates in India: Determinants of their Employment and Earnings

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Abstract

In terms of enrolments and number of higher education institutions, engineering education has expanded fast in India during the last three decades. The expansion has been clearly in response to labour market conditions – growing demand for engineering manpower and higher wages relative to others. However labour market conditions are changing fast, and the growth in the field of engineering education has also slowed down in the most recent years. Using the data collected through a survey of about 7,000 students enrolled in 40 engineering institutions in four different states in India, an attempt has been made in this paper to analyse two specific aspects relating to labour market for engineering graduates: determinants of employment probabilities of engineering graduates and determinants of their earnings. Multi-variate logistic regression and ordinary least squares (OLS) techniques have been used to examine respectively these two aspects. Among the hypothesized factors, education and related factors seem to be the main predictors of employment, while education related factors, job related factors and gender seem to influence the earnings of the engineering graduates. The paper contributes to the extensive research on labour market research on higher education, and to the limited research on economic aspects of employment and earnings of engineering graduates in India. The results have important implications for policy making relating to engineering education and employment in India and other countries.

Keywords: Earnings/wages, employment, engineering education, higher education, India, labour market

Introduction

Eighty percent of engineers are not employable for any job in the knowledge economy.
(Aspiring Minds: *National Employability Report, 2019*, p. 5)

Only forty nine percent of engineering graduates have 'employable talent'.
(Wheebox: *India Skill Report, 2020*, p. 13)

Higher education in India has expanded very fast, particularly since the mid-1980s. Compared to 3.6 million students enrolled in 5,227 institutions of higher education in the academic calendar year 1985-86 (UGC, 1987), the system has grown to 993 universities, 40 thousand colleges with 37.4 million students in 2018-19 (MHRD, 2019). Almost all branches of higher education have experienced high growth. Among the many branches, engineering education as a specific field of study in higher education has grown relatively very fast. In 1985-86 the enrolments in engineering and technology were of the order of 180,000, constituting 3.4 percent of the total enrolments in higher education. By 2017-18, the student numbers increased to 4.8 million and the share of students enrolled in engineering education in the total increased more than four-fold, to 16 percent (UGC, 2018).[1] The outturn of graduates in engineering and technology was of the order of 838,000 in 2018-19 (MHRD, 2019, p. 24). Among major disciplines, the employability of graduates in engineering seems to be the highest: 57 percent in 2019,

[1] In 2018-19, these numbers seemed to have respectively declined to 3.9 million and 13.5 percent (MHRD, 2019).

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which has slidden down to 49 percent in 2020, as shown in Figure 1. The private rate of return to first degree in engineering education in India was above 20 percent in 2006; even the social rate of return was above 16 percent (Carnoy et al., 2012, p. 23). Perhaps this is still the reason why there still exists huge demand for engineering education in India[2], even though quite a few cracks are being noted both with respect to employment and also associated earnings of engineering graduates in the markets: employment opportunities begin to be not so good, or salaries as attractive as they were about 1-2 decades ago. In this paper we wish to explore the factors that predict employment of engineering graduates, and determinants of their earnings.

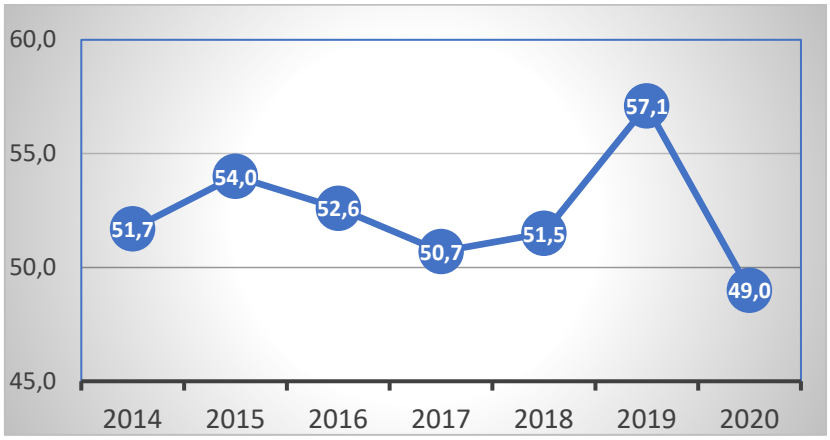

Figure 1. Fluctuating employability of engineering (%) graduates (B.Engg./B.Tech.)
Source: *India Skills Report 2020* (Wheebox, 2020, p. 13)

It is widely held that the massive expansion of higher education and of engineering education in particular has come at the cost of quality of education (Carnoy et al., 2013; Loyalka et al., 2014; MHRD, 2015). The result being production of large numbers of engineering graduates who are unemployable. Various reports point out that 80-90 percent of the graduates are not fit for employment. According to the NASSCOM-McKinsey report (2005) only one-fourth of the total engineering graduates in India are employable in appropriate fields. At the same time there are critical shortages of engineering manpower in various sectors of the economy. Thus, there seem to be major mismatches between demand and supply of engineering manpower.

The problem owes also to the unbridled growth of private sector in engineering education in India (MHRD, 2003). In 1970, India had a total of 139 engineering institutions, and only four of these were private, while currently the private institutions account for more than 80 percent of the total and in some southern states it has crossed 95 percent. Experts (e.g., MHRD, 2003) have condemned these private institutions for producing "IT coolies" – graduates with no skills, and glut in the labour market. It is often argued and also evident that with poor quality teachers and highly inadequate infrastructure, these private institutions are not capable of producing competent engineers from the system which ultimately leads to the problem of massive unemployment and underemployment. They have often contributed to the lowering of standard of the educational programmes offered by the engineering colleges in India and thereby in their employment and earnings (Biswas et al., 2010). On the whole, the quality of engineering graduates is generally observed to be very poor and this is regarded as the main reason for unemployment and low wages of engineering graduates. For instance, only 2.5% of the engineering graduates possess the skills in artificial intelligence (i.e., machine learning and data science – considered as very important for employment in the changing labour market), 1.5% to 4.5% possess the necessary skills in data engineering, and only 2.8% to 5.3% are qualified in wireless technologies that industry requires (Aspiring Minds, 2019).

Based upon the data collected through a primary survey, an attempt has been made in this paper to analyse the employment and related aspects of engineering graduates in India. The database and the

[2] In a pioneering study in India, Blaug et al. (1969) attributed graduate unemployment in India to high private rates of return.

methodology are briefly described in the following section. After describing the labour market profile of engineering graduates based on the primary survey in Section 3, Section 4 examines the determinants of employment probabilities of engineering graduates. This is done with the help of logistic regression, considering 'whether the engineering graduates have been employed or not' as the dependent variable. In Section 5, we examine the determinants of earnings of engineering graduates, using the ordinary least squares (OLS) technique. The paper ends with presenting a short summary of the study and its implications for public policy on engineering education.

Database and Methodology

The paper examines the possible determinants of employment and earnings of engineering graduates in India, based on data collected from a survey of 6,623 students studying in 40 engineering institutions in four major states in India, namely, (the National Capital Region of) Delhi, Maharashtra, Karnataka, and Tamil Nadu, where demand for engineering education has been very high. Karnataka and Tamil Nadu are in South India, Delhi in the north and Maharashtra in the west. Engineering education has not expanded much in the eastern states or in the central parts of India. Thus, the survey can be considered as fairly representing all the geographical regions of India. The survey covers Indian Institutes of Technology (IITs), National Institutes of Technology (NITs) (known earlier as Regional Colleges of Engineering), central and state universities, private universities and government and private colleges – government aided private, and private institutions that do not receive significant government support and rely mostly on student fee. The later are familiarly known as unaided private colleges/universities. The IITs, NITs and central universities are funded by the union (central) government and the others by state (provincial) governments. Thus, the survey can be regarded as representative of the variety of engineering institutions in the country. The survey was conducted by the National University of Educational Planning and Administration in the context of a larger international comparative study of BRIC countries (Brazil, Russia, India and China) (Carnoy et al., 2013), of which the author is a part. The larger study focused on examining the massive expansion of higher education – essentially technical – engineering, in the four BRIC countries. Through a student questionnaire, a huge amount of quantitative data, apart from a small amount of qualitative data are collected in India on a variety of dimensions of engineering education, including those relating to family background, educational and occupational background of parents, caste, religion, features of current education of students – public or private institution, the stream of engineering they are enrolled in, expenditure on engineering degree studies, job offers received and the starting salaries offered, and students' perceptions on the quality education they received. Considerations of the wider study determined the choice of the states; states and institutions were chosen based on purposive random sampling; institutions have been chosen based on availability of major streams of engineering education at first degree level; and all the students in the final (fourth) year enrolled in the selected departments were surveyed. One of the reasons for selecting fourth year students as our respondents in the survey is the students in the final year of study already get employment (or failed to get employment) offers, along with details on starting salaries, in campus recruitments which are conducted in most engineering institutions in India.

It is important to note here that we do not have the data on actual employment of the graduates or on their earnings. Students in the final year of the studies were the respondents in our survey. They are yet to enter the job market. Campus recruitment is a very common practice in many higher education institutions in India.[3] Recruitment of undergraduate engineering students through campus recruitment drives by engineering companies has become very popular, in which a variety of companies – foreign, domestic, and joint ventures participate.[4] Students are recruited by prospective employers before the

[3] While a majority of the institutions invite or allow campus recruitment, and some, particularly the private institutions use the 'placement record' to boast of their quality and popularity in their approach to attract students, some institutions might ban on-campus recruitment, fearing that students would become money-minded and lose interest in studies as they get job offers prior to their completion of their studies. It might also disorient students from pursuing further higher studies. But such institutions are very few in the country. On the whole, placement record has also become an important consideration in national assessment and accreditation and national ranking framework.

[4] Major companies that visited different engineering institutions for campus placement in our survey, as per the statements of the institutions, include: Tata Consultancy Services, Microsoft, Samsung, Infosys, Hindustan Computers Limited, McKinsey, Birlasoft, International Business Machines, Computer Science Corporation, Syntel, Maruti Automobiles, Tata Motors, Bharat

students complete their studies. Generally, the recruitment takes place through placement cells of the institution, when the students are in the final year/semester of studies. A variety of firms, companies or organizations interested in recruiting engineering graduates belonging to different disciplines, visit institutions for on-campus recruitment of graduates as per their needs. They use face-to-face interviews, group discussions or some other selection method. They consider it as the best method of catching the talent early. Selected students are given a job offer that describes conditions relating to the job, including starting annual salary. So, in our survey, students were asked a question, 'whether she/he has got job offer' in the on-campus recruitment. Students who have received job offers are considered here as 'employed' and who have not as 'unemployed'. Similarly, the annual salary offered to the students (by the employers) is taken as the actual earnings from their jobs in the first year, or as starting salaries. It would have been ideal to use information on graduates who are actually employed, but the survey has not considered employed graduates. Consideration of the variables for the econometric analysis is seriously constrained by the availability of data. We could consider only those variables that could be generated from the survey data. The survey did not include many relevant variables. There are several other probable determinants of employment and earnings of engineering graduates that could not be considered.

After providing a brief discussion on the employment and earnings profiles of the graduates surveyed in the next section, we examine predictors of employment, and determinants of earnings of engineering graduates, using standard quantitative tools of modern economic analysis and STATA software.

The following logit regression equation is estimated to find the factors that predict the probability of securing employment by the engineering graduates:

$$Prob\ (\text{EMPLOYMENT}=1) = f(X_i) \qquad \text{(Eqn. 1)}$$

i.e., probability of a graduate getting employment (variable employment taking the value of one, as against 0 – not getting employment) is a function of a set of variables X_i. Logit regression is one of the most commonly used statistical tool in applied statistics for discrete statistical analysis. The dependent variable, EMPLOYMRNT is also known as binomial response variable, as it takes the value of only 1 or 0. Odds ratios, calculated using regression coefficients, help us to know the probability of happening the event, i.e., getting employment is high or low, given a change in the independent variable. If the odds ratio is greater than one, then it is more likely to occur and if the ratios is less than one, it is less likely to occur. Note that if the reference event is more likely to happen, it means that given the values of co-variates, the other option is less likely and if the reference event is less likely, then the other option is more likely. Marginal effects describe the average effect of changes in predictor variables on the change in the probability of securing employment.

The determinants of earnings are estimated with the help of the following OLS log-linear regression equation:

$$\ln(\text{EARNINGS}) = f(X_i) \qquad \text{(Eqn. 2)}$$

The dependent variable EARNINGS used here is natural logarithm of annual earnings of the graduates, as widely used in the literature. The variations in earnings are explained by a set of explanatory variables X_i. The regression coefficients of the variables indicate the extent of influence of each variable on the earnings. A regression coefficient describes the size and direction of the relationship between the independent and dependent variable, after controlling for other variables.

The two econometric tools are extensively used in the literature in economics under such circumstances. The respective specifications used are described in detail in the later sections of the paper, along with the variables chosen.

Heavy Electrical Limited (BhEL), National Thermal Power Corporation (NTPC), and Defence Research and Development Organisation (DRDO) of Government of India, Accenture, Convergys, I-Flex, Sapient, and Tata Tele Services and a few others.

Employment and Earnings Profile of Engineering Graduates[5]

Employment Profile

As Sudipto Sarkar (2019) highlighted, every year on an average 1.5 million students get their degree in engineering education in India, but due to lack of skills required to perform technical jobs less than 20 percent get employment in their core domain. This is a huge loss in terms of manpower and economy. As per our survey, only 26 percent of the graduates succeed in getting employment offers through on-campus recruitment, as shown in Table 1; others could not make it.[6] There may be many reasons for such a low rate of 'employment.' A good number of firms/organisations/companies/industries visit universities, colleges and other institutions of engineering education in search of talent and select students as per their requirements. Job offers are conditioned by the requirements of the organisations – number and nature. It is also possible that some students might not like the jobs and associated conditions offered by the companies, including pay, location and job profile or the goodwill of the company; or they may have some preference to go for further studies, and they may not finally take up those jobs. But quite probably in such cases also the students take the offers but may not finally join the given job. On the whole, since a large number of engineering institutions are visited by prospective employers, and a majority of students participate in the recruitment process, it may not be far from correct to assume that the results of campus recruitment reflect employment and unemployment (including voluntary unemployment) conditions of engineering graduates in the country. As noted, the employment rate at national level is also close to our estimate.

Table 1. Employment profile of engineering graduates in India

(Engineering students who have got job offer in campus recruitment)

Category	*Percentage*	*Field of Employment*		*Region of Placement*		*Type of Enterprise*		
		Engineering	*Non-Engineering*	*Within state*	*Outside state*	*Foreign*	*Joint venture*	*Domestic*
GENDER								
Male	25.35	88.92	11.08	59.60	40.40	34.65	37.36	27.99
Female	26.69	90.17	9.83	50.58	49.42	30.56	44.84	24.60
*NATIVITY**								
Native of the state	23.88	85.08	14.92	51.41	48.59	37.33	35.08	27.59
Outside state	21.53	88.56	11.44	59.45	40.55	31.16	42.15	26.69
TYPE OF EDUCATIONAL INSTITUTION								
Government	37.12	88.99	11.01	56.35	43.65	33.77	33.08	33.15
Private	20.03	89.62	10.38	57.37	42.63	33.38	42.31	24.31
STREAM OF ENGINEERING STUDY								
Traditional	16.68	81.00	19.00	56.27	43.73	27.46	41.98	30.56
IT-related	29.77	91.35	8.65	57.37	42.63	36.07	38.40	25.53
Total	25.74 (1657)	89.31	10.69	57.03	42.97	33.50	39.47	27.03

* Whether the student belongs to the same state where the education institution is located, or s/he is a native of some other state in India.

Gender discrimination in the job market is a matter of concern in many countries, including in India. Further, the problem of gender discrimination in the job market is predominately visible in the engineering sector, where men are traditionally preferred to female graduates (Duraisamy & Duraisamy, 1999). According to our survey, gender differences are very marginal: around 25 percent of male students have got job offers, compared to 27 percent among females. However, we find noticeable gender differences when it comes to employment by different types of organisations – foreign, joint ventures and domestic.

[5] For a general profile of the engineering students based on our sample survey, see Tilak (2020b).

[6] The employment status of engineering graduates is as at the time of the survey (in the fourth year of the engineering studies); some more might get employed after completion of the final year of engineering studies, or even before. After all, graduates also try for employment through many other methods, particularly after completing the studies. Thus, our estimates may have to be seen as under-estimates.

A student's choice of enrolment in an engineering institution depends *inter alia* on the job placement record of the institution. Engineering institutions which have higher placement records in recent years obviously attract more students than the institutions which have performed poorly in the campus placement/recruitment. This is more true in case of private engineering institutions than public universities/engineering institutions. While students mostly prefer government institutions to private ones for various reasons (see Tilak, 2020b), between the several private universities and colleges, students prefer enrolling in those institutions which have better campus placement records to others. As the numbers of private universities and colleges of engineering in India are very high, students have more options among these institutions as institutions compete with each other in attracting students. Private institutions, therefore, use various methods to attract companies to recruit their students and to have a record of high campus placement. On the other hand, as the public engineering institutions are small in number, their quality is high and tuition low, students face fierce competition for admission in these institutions. Hence the record of campus placement (records) does not matter much in the enrolment in the public institutions, though generally these institutions are considered to be faring better than private ones in placement records as well.

We note that in our survey, the number of students who have got a job offer is nearly two times higher in government institutions than in private institutions (Table 1). The employers may obviously be concerned with quality of the institutions and the graduates. Public institutions, with better trained and qualified faculty and good academic infrastructure, could produce better trained graduates than private universities and colleges. The latter are known to be having poor quality teachers and in small numbers than required, and not necessarily good infrastructure in terms of libraries and laboratories. The facilities and structures provided for campus recruitment in government institutions may also be more transparent and on the whole better than in private institutions. As a result, government institutions have a better placement record than private institutions. That a higher proportion of students studying in public institutions secure job offers than students enrolled in private institutions, confirms the quality advantage that public institutions have over private institutions, and the employer's recognition of the same.

The stream/department of engineering that one is enrolled carries a high weight in the labour market. Jobs in the engineering and technical areas are highly specialized and the scope for substitution between different specialisations or streams of study in the recruitment market is to some extent restricted, as the job requirements and the area of specialisation in engineering education are somewhat closely related. For example, the requirement of a company for a graduate in electronics engineering cannot be substituted with a graduate in civil or mechanical engineering, or vice versa. Hence it can be stated that employment of engineering graduates also depends upon the stream of study one is graduated in and the level of employment might depend upon the jobs available under each category. As the electronics and IT-related firms seemed to be growing fast, higher number of graduates in these disciplines might get employment than those specialised in other engineering disciplines. That rates of employment vary widely by discipline of engineering and that they also change overtime is well documented. For example, according to *India Skill Report 2020*, the employability of graduates in electronics and communications engineering is the highest—about 60 percent, compared to 50 percent among graduates of civil engineering in 2019 (Figure 2).

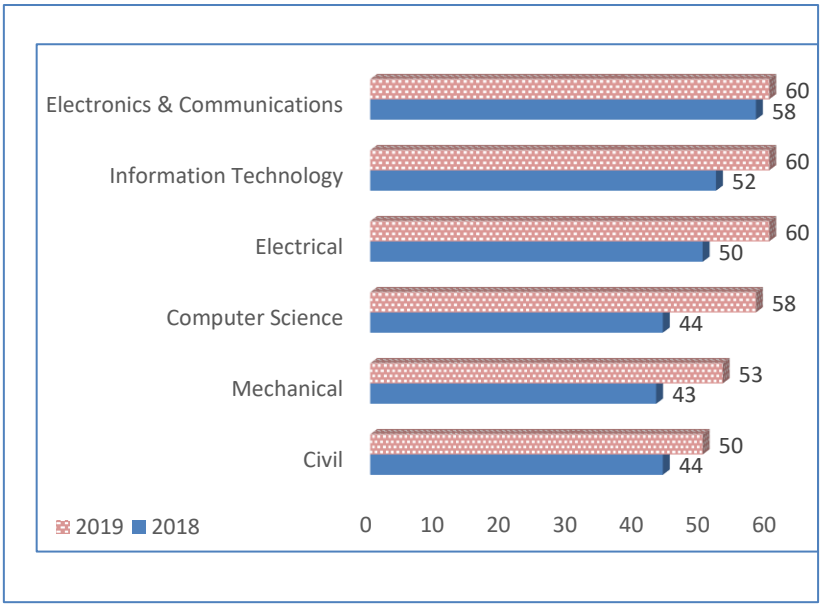

Figure 2. Employability of engineering (%) graduates by Stream of Study, 2018 and 2019
Source: *India Skills Report 2020* (Wheebox, 2020, p. 29)

We also find similar significant differences in rates of employment between the graduates of various disciplines of engineering. In our survey, we have classified engineering streams (which can be called 'majors' as in some western universities) into two major categories: 'traditional' or conventional that includes civil, mechanical, and electrical engineering, and 'modern' consisting of disciplines like electronics, computers, information technology etc. We note that 17 percent of the graduates in traditional disciplines have got job offers, while the corresponding figure is almost double – 30 percent in case of those pursuing studies in IT and related departments.

Coinciding with popular perceptions, employment conditions seem to favour graduates in modern streams of engineering as against those graduating in traditional areas, though domestic and joint ventures recruit higher proportions of graduates in traditional disciplines of engineering. Joint ventures seem to have a higher demand for graduates in both IT-related and traditional disciplines.

Nearly one-fourth, i.e., 24 percent of the 'native' students[7] have got job offers in their native states and 22 percent of the non-natives have got their job offers in 'other states'. Surprisingly, more male students have got jobs within their state of domicile as compared to females, the shares being 60 percent for males and 51 percent for females. There is not much difference in this between the graduates of private and public institutions, or between those who graduated in traditional and modern streams of engineering. Surprisingly, only half of the engineering students (51 percent) belonging to 'within state' have got their job offer in the same state. The other half has to migrate to other states for employment. This also depends on the employment conditions in various state, which widely vary in India.

Different kinds of engineering firms go to the educational institutions for campus recruitment for some jobs in engineering and some jobs in non-engineering activities like administration and management in engineering and non-engineering firms. The jobs in the engineering category includes engineers—civil, mechanical, electrical, electronics, computers, information technology etc., while jobs of non-engineering category include executive posts in human resources, marketing, and jobs in management, finances, administration, planning, development, etc. Graduates, who are not successful (or uninterested) in getting a suitable job in their parent discipline of engineering, may choose different jobs in non-engineering categories. Firms that come for campus recruitment to engineering institutions might offer the students jobs in either engineering or non-engineering trades, as per their requirements. If

[7] 'Native' students refer to the students who are studying in an institution located in the state of which they are the natives. Non-natives are those who went from home state to another state for studies.

engineers are employed in non-engineering jobs, including in civil services and public administration, this, generally known as 'mal-employment' is considered by some as a waste of resources – financial and human. This is also considered as a mismatch between education and qualifications. We find that nine out of every ten of the students who got jobs on-campus recruitment have taken jobs in areas of engineering and closely related areas, and the rest have gone for non-engineering jobs. Those who leave engineering in favour of jobs in non-engineering activities are very few in number. In contrast to general perceptions, relatively a higher number of female students have taken engineering related jobs than male students. There is not much variation in this between students from government and private engineering institutions. But we find some difference in the pattern between students in conventional disciplines of engineering and IT-related modern disciplines. As high as 91 percent of the students in modern disciplines who have got their job offer have taken up (or selected for) the engineering related jobs whereas only 81 percent students enrolled in traditional departments of engineering (mechanical engineering and electrical engineering) have done the same. That is, nearly 20 percent of students in traditional disciplines chose non-engineering jobs for their employment.

Among the several companies that go for campus recruitment drive, domestic companies do not seem to perform so well. Foreign companies attracted as many as 43 percent of the students, and joint venture companies another 40 percent. This is the same pattern in case of male students who received job offers. But in case of female graduates, joint ventures recruited them more than others. Joint ventures also attracted students from private educational institutions more than foreign and domestic companies. Hence, a higher number of students from private universities/colleges have got job offers in joint venture companies, whereas the students from government institutions received offers mostly from domestic companies. Joint ventures and foreign firms together account for 70 percent of the employment of graduates in traditional areas of engineering and 75 percent in IT-related modern areas, the rest being accounted by domestic enterprises.

Earnings Profile of the Graduates

Graduates in engineering earn substantially higher than other graduates, and even other post (master's degree) graduates in India. Based on National Sample Survey 2006, Carnoy et al. (2012) estimated that the annual earnings of male graduates in engineering earn consistently higher than post (master degree) graduates for the entire life time, as shown in Figure 3. But they are not the same for all. They differ by gender, by the type of institution they studied, by the nature of organisation they are employed and so on. Based on our survey, we present some such details on how they differ by different characteristics of the graduates.

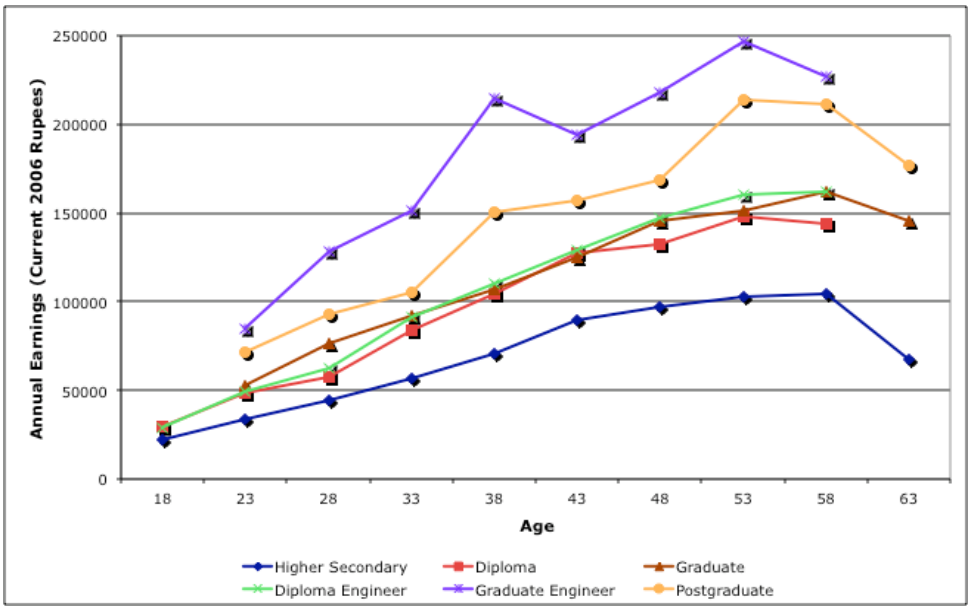

Figure 3. Annual earnings of males in India by educational level, 2006
Source: Carnoy et al. (2012, p. 22)

As stated earlier we use here in this paper, the wages/salaries offered for the first year of employment at the time of on-campus recruitment, as the earnings of the graduates. Though they are not actual earnings, nor of course are they lifetime earnings that are used by many scholars in such contexts, they can be considered as starting salaries of the graduates. On average, such earnings amounted to Rs. 387 thousand per annum per person.[8] There is not much gender difference in the earnings; both men and women receive more or less the same.[9] Graduates from public institutions of higher education seem to receive better treatment with an offer of higher earnings than graduates from private institutions, which is partly reflective of the differences in quality of education the graduates received. Annual earnings offered to graduates of public institutions was of the order of Rs. 410 thousand, compared to Rs. 356 thousand offered to graduates of private institutions. As stated earlier this reflects partly the employers' acknowledgement of the quality of public institutions. Generally, it is observed that students are better trained in government institutions, and hence come out better skilled and more competent, than the students of private institutions and hence, they may even be able to bargain for higher wages. Availability of trained faculty, better physical infrastructure such as laboratories, classrooms, hostels, and overall academic atmosphere are often cited as major reasons for superior quality of education provided in government institutions in India.[10]

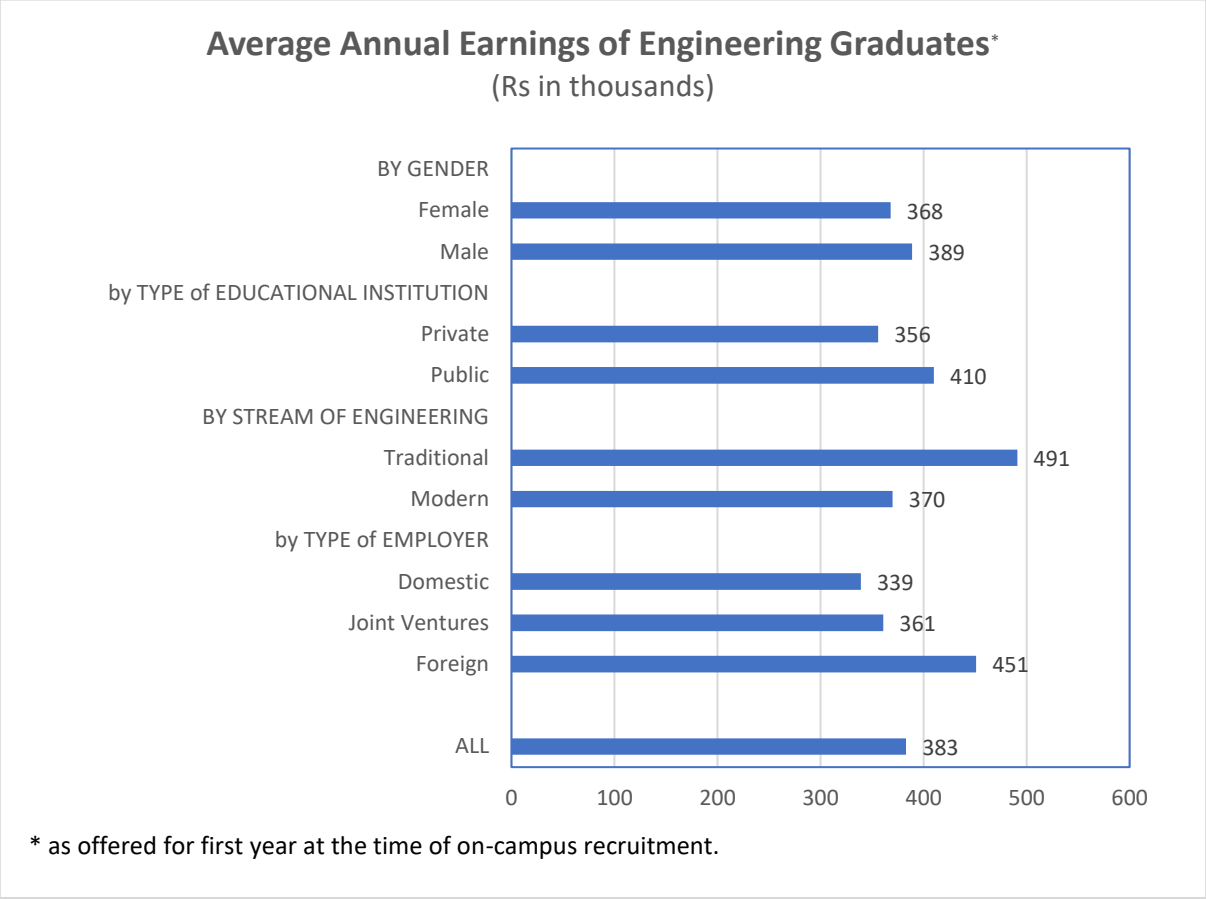

Figure 4. Starting average annual salaries of engineering graduates in India

Further, somewhat contrary to general opinion, graduates in traditional streams of engineering like mechanical, civil, and electrical, are offered higher wages – about 33 percent higher -- than those who graduated in modern – IT related streams, as shown in Figure 4. While graduates of modern disciplines

[8] At the current exchange rate, US$1 = Rs. 70 (approximate).
[9] In the study on Delhi, which was based on sub-sample of the database of the present study, Choudhury (2015); however, found that women are offered salaries which are about 54 percent less than that of men.
[10] See Rao (2007) and Biswas *et al* (2010) for details on quality related aspects of technical education in India. See also Loyalka et al (2014) on the quality related aspects in BRIC countries.

get better treatment in terms of employment, in case of pay-checks graduates in traditional disciplines get a better deal. Students seem to have strong preference in favour of modern disciplines expecting quick employment and high wages (Tilak, 2020a). Foreign companies obviously pay higher levels of salaries than joint ventures and domestic companies. The pay in foreign companies is 33 percent higher than the pay offered by domestic organisations, which, in turn, is seven percent less than what joint ventures offer.

Determinants of Graduate Employment

Which individual traits and social, economic, and institutional factors predict graduate employment? The literature on determinants of unemployment/employment is dominated by studies at macro level, wherein rates of unemployment or employment are considered as a function of economic growth, level of technology, structural and other factors. Drawing from 21 case studies of developing and developed countries, sponsored by UNESCO-IIEP, Sanyal (1987a; 1987b) concluded that the stagnant economic growth is the most dominant factor that explains graduate unemployment. There are also of course a good number of studies based on graduate surveys which analysed individual employment as a function of household factors -- social, economic, etc., individual factors, academic background of the students, etc. As Atkinson and Pennington (2012) found, analysing unemployment of engineering graduates in UK, there is no single reason for unemployment. A multitude of factors explain why graduates are employed or unemployed. Macmillan et al. (2013) highlighted the importance of several factors in access to good employment in UK that include family background, networks, and the pubic/private school the graduates attended. They have also shown that graduates from private schools are more likely to enter 'high status' occupations.

Several studies observed that the subject or the major the students choose in their studies matter a lot in employment market. For example, Kong (2011) analysed employment of graduates in Beijing, China and finds that employment of graduates is considerably influenced by the 'major' chosen by the student during their studies, apart from reputation of the college and gender of the graduate; and that women find jobs more easily. On the other hand, in a study on Korea, Park (2015) concluded based on a hierarchical liner regression model that the curriculum – the major subject chosen was not statistically significant, nor were the household income, club activities and employment preparation activities. In a study of a small township in South Africa, Dunga (2014) found that education level, age, marital status, household labour force and total government grants were significant determinants of employment status. As one would expect, university scores are used by the employers as a selection criterion to filter through the competition among job applicants in many cases (Boissiere et al., 1985). After all, the students with good academic records are viewed more productive and as being better prepared for their first jobs (Jones & Jackson, 1990). Preference for employment in public sector also keeps many graduates unemployed, as employment in public sector is reactively limited, as Panchamukhi (1987) has shown in case of India. Analysing educated unemployment in India, researchers (e.g., Bairagya, 2015) identified socioeconomic, regional and other factors and used probit or logit regression technique. Choudhury (2012) in a study of engineering graduates in Delhi that used a sub sample of the database of the present research study, concluded that while the type of the institution (public or private), caste, academic merit of the student, and the loan status of the student were significant determinants of employment, and the major stream of engineering, parental occupation or education etc., were not having any influence on the employment probabilities of the graduates.

While there is a good number of studies on employment of the graduates in India, many were conducted in the 1970s and 1980s, when the economic and educational conditions were altogether different. While many studies tend to explain employment and unemployment with the help of national economic factors, including industrial production, growth in gross domestic product, few concentrated on graduates' traits, the quality of education they received, and related aspects. Some research has focused on some specific disciplines like economics. There is need to examine the determinants separately for each major discipline. There are practically no studies focussing on engineering education in India. Hence the present study may be seen as a modest contribution in this direction. Based on a quick review of the literature, largely following the framework adopted in Choudhury (2013) apart from others, we identify a set of predictors of employment of engineering graduates. The set includes 15 variables grouped into

three categories, (i) personal attributes (individual factors) – gender and cate, (ii) household factors that include household income, parental occupation, and parental schooling, and (iii) academic aspects – academic performance at the senior secondary level (before entering undergraduate engineering studies), the medium of instruction at secondary level, the type of education institution currently attending (public or private), and the 'major' – the main stream of engineering: modern or traditional. We have also included in category (iii) a variable that reflects the student's educational loan status – whether she/he has taken any educational loan for the engineering studies.

We hypothesise that factors relating to educational background of the students are the most important determinants of employment of engineering graduates in India; and socio-economic background of the students including individual factors such as gender and caste, and household conditions do not influence much the employment probabilities of graduates. To examine this, the following specification of logistic regression equation is used, and predictors of employment probabilities of the graduates are estimated:

$$\text{EMPLOYMENT} = \alpha + \beta_1 \text{GENDER} + \beta_2 \text{SC} + \beta_3 \text{ST} + \beta_4 \text{OBC} + \beta_5 \textit{ln}\text{HHY} + \beta_6 \text{FATHOCP\_PROF} + \beta_7 \text{FATHOCP\_BUS} + \beta_8 \text{FATHER\_ED} + \beta_9 \text{ENRL\_PVT} + \beta_{10} \text{STREAM\_STUDY} + \beta_{11} \text{SEC\_MARKS} + \beta_{12} \text{SEC\_MEDIUM} + \beta_{13} \text{LOAN} + \varepsilon \quad \text{(Eqn. 3)}$$

where,

EMPLOYMENT = 1, if the graduate is employed (got a job offer), and 0 otherwise; α = constant; βi = respective coefficients of the explanatory variables and ε = error term.

Table A.1 in the Appendix gives a description and definition of the variables. Table 2.2 gives summary statistics of the variables. The statistical results are given in Table 2.

Table 2. Logit estimates of the employment probabilities of engineering graduates

Variables	***Coefficient***	***Odds Ratio***	***Standard Error***	***Marginal Effect (dy/dx)***
Individual Characteristics				
GENDER	-0.0985	0.9062	0.080	-0.020
SC	0.1675	1.1824	0.168	0.030
ST	0.3409	1.4062	0.320	0.050
OBC	-0.0037	0.9964	0.108	0.000
OTHERS	Reference category			
Household Factors				
*ln*HHY	-0.0847*	0.9189	0.045	-0.010
FATHOCP_PROF	-0.1143	0.8920	0.092	-0.020
FATHOCP_BUS	-0.1025	0.9026	0.094	-0.020
FATHOCP_OTHERS	Reference category			
FATH_ED	-0.0373***	0.9634	0.013	-0.010
Educational Background				
ENRL_PVT	0.3511***	1.4207	0.082	0.060
STREAM_STUDY	-0.2662***	0.7662	0.087	-0.440
SEC_MARKS	-0.0642***	0.9378	0.004	-0.010
SEC_MEDIUM	-0.1873*	0.8292	0.111	-0.030
LOAN	-0.3052**	0.7370	0.118	-0.060
Intercept	7.9395**		0.634	
Log-Likelihood	-2283.79			
Pseudo R^2	0.0808			
Number of Observations	4,432			

Significance level: *** p < 0.01; ** p < 0.05; * p < 0.1

Results and discussion

Given the general gender preferences and discrimination in labour market, it is generally presumed that employers coming for on-campus recruitment will have a bias against female candidates and accordingly prefer recruiting male graduates. They might presume rightly or wrongly that male employees would not mind staying in office and work for longer hours, while females having family obligations, would

not do so. The problem of gender discrimination in the job market is said to be predominant particularly in the engineering sector, where male applicants get better treatment than female graduates. The popular perception is that engineering and technical education is a masculine domain (Goel, 2007). But it was also found that women perform better in campus-recruitment drive in engineering colleges in India (Gokuldas, 2011). Given some of these popular views, some of which were supported by research, one can hypothesise that *ceteris pari bus*, companies coming for on-campus recruitment prefer hiring male graduates to women. We find here that the probability of getting employment for a woman is less than that for a male student, but the difference is statistically not significant. We have already noted that the absolute difference in employment rates is also very small.

Caste is included as an explanatory variable to see whether employers have any preference towards or bias against students belonging to lower social background (e.g., scheduled castes [SC], scheduled tribes [ST] and other backward castes [OBC]) in providing jobs.[11] When caste is included in the equation in the form of binary variables for SC, ST and OBC, with general population as a reference category, the results show that caste does not matter, as it turns out to be statistically not significant. Generally, it seems that majority of the companies going for on-campus recruitment belongs to private sector which does not necessarily provide the Constitutionally guaranteed reservations (quotas) to the students belonging to disadvantaged sections of population such as SCs, STs and OBCs. The employers may not give any preference or discriminate against these caste groups of graduates.

We consider three important dimensions relating to socioeconomic conditions of households – household income, father's occupation, and father's education. Household income is measured in logarithmic form, to even out extreme differences. Father's occupation is defined in three categories: (a) professional or technical worker; (b) businessmen; and (c) others; [12] and years of schooling of the father is taken for father's education. It is hoped that these three dimensions reflect economic and some kind of 'social capital' that the students possess. Household income represents household's economic status. The higher the economic status of a household, the greater could be the chances of getting employment by a graduate, as rich households might be able to invest additional resources on improving English language, skills on computers etc., which seem to have been highly valued by the employers in the job selection processes, besides the formal education and training one receives. Similarly, parental occupation and education can be expected to be of help for the student to access better information on labour market, and to make a wise decision in selecting the jobs. So, one may expect all the three dimensions on household factors to have a positive effect on employment of graduates. Surprisingly, the results show the other way. The coefficients of all the variables are negative in value: higher family income, parents' higher occupational status or parent's education reduce the probability of employment. While the coefficient of occupation is not statistically significant, the other two – lnHHY and FATHER_ED are statistically significant.

The third group of variables that can be expected to have considerable influence on graduate employment relates to the educational background of the students. We do not have information on the quality of engineering education that the students receive, or the quality of the institution, though they are generally found to be very important. Instead, we use two indicators of academic performance of the students at senior secondary level, which are highly related to admission, and may also be related to the performance in undergraduate engineering studies. They are: the marks secured in the senior secondary

[11] The *Constitution of India* provides for reservation of 15 percent of employment in public sector for SCs, 7.5 percent for STs and 27 percent for OBCs. The proportions are based on the estimated shares of respective groups in the total population. The reservation for OBCs was added in 1993, and it is based on the criterion of social and educational backwardness with a creamy layer cap of Rs. 800,000 annual income of the household.

[12] In the survey, information was collected on occupation of the parents in sixteen occupational categories, which are re-grouped here into three: (a) professional or technical workers; (b) businessmen/women; and (c) others. Mainly due to small numbers of observations in many of the occupation categories such as skilled works (foreman, craftsman etc.), unskilled workers (mostly ordinary labourers working for daily wages), clerical and related workers, service workers, farmers, fishermen and workers in related activities, skilled/unskilled retired workers, and workers who were not classified by occupation (athletes, actors, musicians, unemployed, partially employed), etc., are included in the category of 'others'. The category of 'professional or technical workers' includes both junior and senior professional workers/salaried employees like doctors, professors, lawyers, architects, engineers, nurses, teachers, editors, photographers and bank employees.

examination (SEC_MARKS) and the medium of instruction (English/non-English) at senior secondary level (SEC_MEDIUM). It can be argued that graduates having higher scores in senior secondary examination may have better chance in job market than the students scoring comparatively lower percentage of marks. Prospective employers obviously consider the previous academic background of the graduates in their selection process. In the absence of information on performance of graduates in degree level examination, they might consider records at school level. Similarly, it is widely felt that communication skills in English carries a premium in employment market (see also Gokuldas, 2011). It is assumed that school graduates with English as a medium of instruction will have a good command over English language and will be able to perform better compared to those with Hindi or regional language as their medium of study. Hence employers may favour those who had English as the medium of instruction than others. Graduates may also feel that proficiency in English language is acquired better when English is used as a medium of instruction, rather than if it is merely a subject. Proficiency in speaking English is considered as a good qualification for good employment. This has been the view for a long period (Allen, 1854), and still continues to be so, supported by robust research as well (Azam et al., 2013; Pandey & Pandey, 2014).

Both the explanatory variables included in the equation to represent academic background of the student, viz., percentage of marks scored in the senior secondary examination (SEC_MARKS) and medium of instruction at senior secondary school, are found to be statistically significant in determining the probability of getting employment, confirming our view that firms going for on-campus recruitment consider the performance of the prospective employees at higher secondary school level and they assign a positive value to the same; but they seem to be not necessarily bothered much about the medium of instruction in which the student studied at school level. Perhaps they would be content with the knowledge and skills in English language, as displayed in the interview/group discussions. The variable SEC_MEDIUM has a negative value and is statistically significant at ten percent level. It is also possible that command over English can be acquired not necessarily when it is used as a medium of instruction, but when it is taught and learnt properly. In fact, apart from this, firms also seem to be interested in non-technical knowledge of the graduates, including their attitudes and values (Gokuladas, 2010).

We have also considered two aspects relating to current education, the type of engineering institution the student is studying in -- public or private, and the stream of engineering -- traditional or modern -- the student is enrolled in. While many earlier studies have considered the prestige or reputation of the college in this context, but we do not have data on the same. We simply consider whether the institution is public or private. Note that in general, public institutions in engineering education in India are generally regarded to be better and high in reputation than private ones. Second, as already described, as employment varies widely by stream of engineering, the stream is also included in the model. Another important variable that is considered here is the loan status of the student -- whether the student has taken any educational loan or not. Employer may either favour or discriminate against those carrying a debt owing to the educational loan taken for the studies. Employer may feel that employees with student loan debts would have financial stress which might interfere with their job performance and finally their productivity at work might get affected, as they might spend considerable time worrying about repayment of their loans; and that in the process they might also continuously look for a better job. Or alternatively employer may feel that employees with such debts cannot risk even frictional unemployment, or pay-cuts for inefficiency, and hence will be loyal to the organisation and work sincerely so as to earn and repay the loan fast (Mercer Survey, 2017).

According to the logit estimates in Table 2, the stream of engineering the graduates have enrolled in (STREAM_STUDY) has the strongest influence on their employment probabilities. Contrary to general perceptions, as revealed from the estimates of marginal effects (given in the last column in Table 2), graduates of IT-related streams – computer science engineering, electronics & communication engineering, and information technology engineering have 44 percentage points less chance of getting employment than the graduates of traditional disciplines. Similarly, the results show that students of private engineering institutions have higher likelihood of getting jobs compared to the students enrolled in government engineering institutions, though the private advantage is not very high: the advantage the graduates in private institutions have is only by six percent points. Both these aspects need further

examination, as they also contradict common perceptions as well as the inferences from the descriptive statistics given in Table 1.

The other important variable that turns out to be statistically significant is the loan status of the students. The results show that students who availed educational loan are at a disadvantage in the labour market; they are less likely to get employment than the students who have no debt obligations. As per the estimate of marginal effect, students taking educational loan have 6 percentage points less chance to get employment than the students who have not taken educational loan.

Determinants of Earnings

There may be many more factors than what we noted here to explain the individual differences in earnings of graduates. In fact, the literature on Economics of Education is abundantly rich with studies on earnings function. Typical or standard earnings function also known as Mincerian equation (Mincer, 1974) included schooling and job experience as the only explanatory variables and both were found to be important in a large number of studies (see e.g., Psacharopoulos & Tilak, 1992). Extended or augmented Mincerian earnings functions include a variety of factors—personal, market, and environmental. They cover individual, social, household characteristics, education variables, factors relating to job, the organisation and many more. Researchers used essentially OLS technique in such contexts, including stepwise repression analysis (e.g., Tilak, 1980). The applications of human capital earnings function have grown many-fold over the years (Willis, 2016).

Some recent research has guided us to identify a few important possible determinants of earnings. The relationship between academic performance and starting salary has been examined by a number of researchers in various experimental settings. A few of the earlier studies in context include James et al. (1989), Weisbrod and Karpoff (1968), and Murnane et al. (1995). Apart from Choudhury (2012), quite a few researchers identified in such context's variables like, knowledge of English, academic performance, quality of college, subjects of study etc., apart from individual, social, economic, and household factors. Chevalier (2011) found significant differences in earrings by the subject studied by the UK graduates. Earnings of graduates in Canada are reported to vary very widely by field of study (Frennet & Frank, 2016); the differences are also marked between several streams of engineering, general engineering, civil and mechanical engineering graduates earning higher than electronics, computer engineering etc. The majors chosen seem to explain a large part of the gender gap in earnings in US (Daymont & Andrisani, 1984). That female graduates earn less than male graduates are well documented in the literature. Ramsey (2008) highlighted this in case of UK. Ramsey (2008) also found that earnings vary by type of university. In India, Duraisamy and Duraisamy (1999) found that women graduates of professional and technical higher education were discriminated in the labour market with respect to wages and the magnitude of discrimination ranged between 55 and 70 percent, depending on the level of education and sector of employment (public/private sector). Madheswaran and Shroff (2000) also found that women graduates with scientific and technical education face discrimination in labour market. Parikh and Sukhatme (2004) reported that women engineers in India encounter hindrances in wages, and career promotions. Focusing on starting salaries of the fresh engineering graduates in IT-related majors in India, Singh (2016) found that the academic performance in school and college, college reputation, school affiliation and engineering major are key predictors of starting salaries. Using the *India Human Development Survey* (of the National Council of Applied Economic Research), Azam et al. (2013) attempted to quantify the effects of English-language skills on wages in terms of rates of return and concluded that returns to English language skills in Indian labour market were very high. After controlling for age, social group, schooling, geography, and proxies for ability, they found that hourly wages are on average 34 percent higher for men who speak fluent English and 13 percent higher for men who speak a little English relative to men who do not speak English. Earnings are not only different for graduates of different subjects, but they are also determined differently for graduates of different subjects (Dolton & Makepece, 1990). Jack Britton et al. (2016) found, based on data on 260,000 graduates in UK, the subjects one studied and the university one attended have strong influence on earnings of graduates. Then comes the finding that the individual variables such as socioeconomic class, region and ethnicity matter, even after controlling for academic-related variables. Chakravarty and Somanathan (2008), using data of 242 final-year students of IIM-Ahmedabad, have also found that

academic performance of the students is an important determinant of salary offered to them. An increase of one grade point in the performance during the first year (measured in terms of Grade Point Average GPA) is estimated to raise the wages by more than 40 percent. Academic performance was found to be the most important determinant of starting salaries in Australia (Chia & Miller, 2008). In the same study it was also found that science graduates earn less than general graduates. According to Panchamukhi (1987), about one-third of variation in graduate earnings in India could be explained by family characteristics.

Taking clue from available research, incorporating some of these variables, an attempt has been made here to find out the determinants of annual earnings of graduates using OLS technique. In such a context, a typical Mincerian (Mincer, 1974) log earnings function is extensively used by a majority of the researchers including those cited above. We also use the same, the augmented Mincerian equation. The selection of the variables is subject to same constraints as in case of the employment equation estimated in the previous section. Variables on gender, and parental occupation and education as household background factors, education related factors that include current and past education, and factors relating to the job – the field of employment (engineering or non-engineering), and type of employment organisation – foreign, joint venture or domestic one, are regressed on earnings. Other variables like caste and household income have been tested and are found to be not relevant, being statistically not significant and having no effect on the explanatory power of the equation. So, the actual OLS regression specification empirically estimated is as follows:

$$ln\ \text{EARNINGS} = \alpha + \beta_1\,\text{GENDER} + \beta_2\,\text{FATHOCP\_PROF} + \beta_3\,\text{FATHOCP\_BUS} + \beta_4\,\text{FATHER\_ED} + \beta_5\,\text{ENRL\_PVT} + \beta_6\,\text{STREAM\_STUDY} + \beta_7\,\text{SEC\_MARKS} + \beta_8\,\text{SEC\_MEDIUM} + \beta_9\,\text{FIELD\_EMPLOYMENT} + \beta_{10}\,\text{TYPE\_FOREIGN} + \beta_{11}\,\text{TYPE\_JOINT} + \varepsilon \quad \text{(Eqn. 4)}$$

where, *ln*EARNINGS = annual earnings of engineering graduates (in logarithmic form); α = constant, β_i = respective coefficient of the explanatory variables, and ε = the random disturbance term capturing unobserved characteristics or simply known as error term. The variables are as described and defined earlier (see Tables A.1 and A.2 in the Appendix).

Results and discussion

The results of the earnings functions are given in Table 3. Some are similar to the results obtained in the logit regressions on employment, while some contradict.

Table 3. OLS Estimate of the annual earnings of engineering graduates

Variables	Coefficient	Standard Error
Individual and Household Factors		
GENDER	-0.0861**	0.0319
FATHOCP_PROF	-0.0467	0.0347
FATHOCP_BUS	-0.0387	0.0367
FATHOCP_OTHERS	Reference	
FATHER_ED	0.0005	0.0053
Past and Current Educational Background of Students		
ENRL_PVT	-0.1484***	0.0310
STREAM_STUDY	0.0268	0.0350
SEC_MARKS	0.0069***	0.0018
SEC_MEDIUM	-0.0811*	0.0428
Job Characteristics		
FIELD_EMPLOYMENT	0.1427**	0.0438
TYPE_JOINT	-0.1232***	0.0383
TYPE_DOME	-0.1242***	0.0326
TYPE_FOREIGN	Reference	
Intercept	0.8466*	0.1713
R Square	0.0912	
Adjusted R Square	0.0804	
F-Value	8.4600***	
Number of Observations	940	

Note: *** significant at 99 percent level; ** significant at 95 percent level; * significant at 90 per cent level.

Gender is not an important predictor of employment, as we have already seen, but it turns out to be a significant factor in the OLS estimation of earnings equation and it works adversely for women. Parent's occupation or education does not have any significant effect on the earnings of the graduates, though father's education has a small positive effect. The higher the level of occupation (professional, or business), lower would be the earnings.

Among the variables chosen to refer to current and past education background of the students, the OLS results show that the type of institution (public or private) is the most significant factor in the determination of earnings of graduates. The coefficient of the variable (ENRL_PVT) is negative and significant at 99 percent level of confidence. Being a graduate from a private institution pushes down the wages by about 15 percent below the earnings of the graduates of government institutions. It may be pertinent to note here that the students at private universities/colleges make higher investments (in terms of household expenditure) than the students of government institutions in their engineering education (Tilak, 2020c), and their probability of getting employment through on-campus recruitment is comparatively high. But more important to note is the fact that the graduates of private institutions earn less than the graduates of public institutions, though it can be the other way in other countries (e.g., Crawford & Vignoles, 2014). Macmillan et al. (2013) have found that graduates form private schools earn higher than those from public institutions. It may depend upon the quality of education a graduate receives.

Almost similar to the estimates of logit equation on employment, English medium has a small value negatively influencing the earnings; the coefficient is significant at ten percent level. While most literature suggests that communication skills in English language matter a lot in employment and earnings, we found here in both the equations that the coefficient of the variable SEC_MEDIUM is negative in value. Perhaps the medium of instruction at secondary level does not matter, as long as the students have good domain knowledge in the subject (reflected in SEC_MARKS), good analytical and quantitative skills and good communication abilities in English. Perhaps none of them is related to the medium of instruction. Possibly it is not the medium of instruction that improves the student's knowledge and skills in a language, but it is how a language is taught and learnt as a subject. After all, English is highly valued by the employers, and it is English that is found to explain a substantial part of the gap in employability of engineering graduates (AspringMinds, 2020, p. 36). It is generally observed by pedagogues that English when taught as a subject, the grammar, the syntax, the linguistics, etc., besides the literature, are much better valued, than when it is merely a medium of instruction.

The stream of study in engineering – modern or conventional also does not matter in earnings, though it matters in case of employment. The regression coefficient is positive in value but not statistically significant. The percentage of marks scored by the student in higher secondary examination (taken as a proxy of quality of the graduates) is positively related with the probability of employment as well as the annual earnings of graduates. More clearly, with the increase in higher secondary examination marks by one percent, the annual earnings of graduates increase by one percent.

Though the common tendency is one to accept a job that offers higher earnings (in fact higher lifetime earnings), in some cases graduates may have overriding preferences relating to the nature and field of job, place of occupation, type and reputation of the firm etc. For example, one might take up a job, even if earnings are relatively less, but if it is a foreign company with a high brand value, or if the location of work is their native city or state than a job with higher earnings in a faraway place. Hence, it is expected that the earnings of the graduates vary significantly with the nature and field of employment. Considering this, in our OLS estimation we have included two factors related to job market namely, field of employment – engineering or non-engineering, and type of enterprise that offers a job. One can expect that the students employed in engineering related fields to make higher earnings than those in non-engineering related jobs. The underlying hypothesis in including the 'type of enterprise' as an explanatory variable in the earnings function is that the graduates employed in foreign firms will earn high wages, followed by the employees of joint-venture companies and then those in domestic companies.

Our results show that these two factors matter most in explaining earnings of the graduates. After controlling for other factors, jobs in engineering activities give one 15 percent higher earnings than if employed in non-engineering activities. Or in other words, engineering graduates employed in non-engineering firms earn 15 percent less than the graduates employed in engineering fields. It supports the general presumption that the earnings in engineering related jobs are higher than non-engineering related jobs. Secondly, if one chooses a domestic unit or a joint venture for employment, she/he would receive about 12 percent less earnings than those employed in foreign establishments.

Summary Conclusions and Implications

Using a survey of about seven thousand students in engineering education in about 40 institutions located in four different states in India, this paper investigates determinants of employment and separately determination of earnings of engineering graduates. The students in the final year of the undergraduate studies have gone through campus recruitment. The job offers and the starting salaries offered in the on-campus recruitment are used as employment and earnings of the graduates in the present study, though they are not the perfect measures. Logistic and OLS regression equations are estimated to examine respectively the probabilities of employment and the determinants of earnings. We have hypothesized that academic performance and related educational variables are the most import predictors of graduate employment, and similar variables and employer/job related characteristics together account for most of the variance in earnings of engineering graduates. To briefly sum up, our results confirm our hypotheses: educational characteristics of graduates, and their fathers' education are the most important predictors of employment; and job characteristics, and secondly education characteristics explain the variance in earnings. Interestingly, factors such as caste and gender, or even family characteristics like father's occupation have no significant role in employment, and caste and parental occupation have no significant influence on earnings.

As a limitation it must be noted that quite a few important factors could not be considered in this exercise due to constraints on data availability. Further research with a larger set of variables, with data on actual employment earnings of those who are already in employment with varying duration of experience may give more robust results. Yet the results arrived here have important implications for further research and policy making relating to engineering education, private education, and employment of engineering graduates. With respect to further research, the study highlights the need to recognise the difference between public and private institutions, and if possible, elite and mass institutions. Second, a survey of employers going for campus recruitment, may yield interesting insights into the criteria that they actually focus on recruitment.

The analysis made here will inform public policy. One can draw quite a few important implications. First, mushrooming of a large number of low-quality private institutions of engineering education will not help employment or economic growth. There needs to be strong checks on the growth of low quality of institutions. AICTE has closed as many as 778 private institutions during 2012-13 to 2019-20. This measure and the number do not seem to be enough. Effective mechanisms of quality control are necessary. Curricular and pedagogical arrangements need to be strengthened and restructured to prepare better quality graduates. The quality of engineering education has to be substantially raised, so that the graduates become immediately employable. The graduates should be equipped with a variety of 21st century skills (beyond core academic subjects), such as artificial intelligence, cloud computing, 3-D machining, data analytics, data engineering, data sciences, machine learning, robotic process automation, etc., along with professional engineering knowledge. Modern engineering problems require students to master engineering knowledge, while the ability to work with others across contexts requires professional skills. Both are interdependent and important for success in labour market (Winberg et al., 2020). Otherwise, there will be a huge wastage of investment made in engineering education from public as well as private, including household, sources.

Interestingly, though most private institutions in India are found to be offering very poor-quality education, probability of getting employment is higher for graduates of private institutions, but they get very low starting salaries compared to those who graduate from public institutions. It is possible that

many engineering graduates from low quality institutions, though prefer engineering jobs, end up in non-engineering jobs, and/or low paying jobs, which reflects yet another form of wastage of resources. Private colleges also focus on their records of campus recruitment, but not much on salaries the graduates would receive, i.e., the quality of employment might be less cared for. Similarly, graduates in modern streams of engineering like electronics and computer science, if employed, are likely to earn more than those who graduated in traditional streams of engineering; but they are at a disadvantage in employment market, compared to the graduates in traditional streams. This may partly reflect the gluts in the labour market. There is overproduction of graduates in modern streams of engineering. Institutions that concentrate on modern streams have to note this and rethink their plans and strategies in this regard. As the AICTE (2018) suggested, institutions have to continuously monitor the future skill requirements and make accordingly suitable changes in the streams of engineering they offer, and even think of new and emerging areas. Though manpower planning has lost its gleam, it may be useful to have a continuous exercise of manpower analysis, including estimation of requirements of manpower of various levels and types for the short and medium terms. This will be useful for efficient monitoring of the system and to adopt necessary policy changes and new policy initiatives. Third, it appears that employers tend to discriminate against those who come with a burden of educational loans. Some mechanisms have to be thought of, in such a way that such discrimination does not take place. A better mechanism is to reduce the reliance of students on loans, and to ensure students instead to depend upon scholarships. A publicly subsidised higher education system would reduce the need for loans.

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Appendix

Table A.1. Description of variables used in the regression analysis: Their definitions and notation

EMPLOYMENT	= 1, if the student got a job offer, =0 otherwise
FIELD_EMPLOYMENT	= 1 if the job offered is in engineering sector, =0 otherwise
TYPE OF ENTERPRISE	Nature of the firm/company/organisation where job is offered
TYPE_DOMESTIC	= 1 if domestic, = 0 otherwise
TYPE_FOREIGN	= 1 if foreign, = 0 otherwise
TYPE_JOINT	= 1 if it is a joint venture, =0 otherwise
***ln*EARNNGS**	Annual salary/wages (Rs.) offered at the time of campus recruitment (logarithmic form)
Individual characteristics	
GENDER	Gender of the student: = 1 if female, 0 otherwise
Caste	Caste of the student
SC	=1 if SC, 0 otherwise
ST	= 1 if ST, 0 otherwise
OBC	= 1, if other backward classes, 0 otherwise
GENERAL	= 1, if general (non-reserved) category, = 0 otherwise (reference category)
Household factors	
lnHHY	Annual income of the household (in Rs.) (logarithmic form)
Father's occupation	
FATHOCP_PROF	= 1, if professional/technical worker, 0 otherwise
FATHOCP_BUS	= 1, if businessman, 0 otherwise
FATHOCP_OTHERS	= 1 if belonging to other occupations, 0 otherwise
Father's Education:	FATHER_ED: actual years of schooling of father
Student's Academic Background (at School level)	
SEC_MARKS:	% of marks secured in the board (school-end) examination
SEC_MEDIUM:	medium of instruction at the school = 1 if English, =0 otherwise
Student's current education	
ENRL_PVT	Type of institution the student is currently studying = 1, if the student is enrolled in a private institution; = 0, otherwise, i.e., if the student is enrolled in a government institution.
STREAM_STUDY	Stream of Engineering Discipline in which the student is enrolled =1 if enrolled in modern/IT-related courses, =0 otherwise
LOAN	Availing of Education Loan (from a commercial bank) =1, if the student has taken any loan, =0 otherwise

Table A.2. Summary statistics of variables used in regression analysis

	Mean	***Standard Deviation***	***Minimum***	***Maximum***
EMPLOYMENT	0.7426	4372	0	1
*ln*EARNINGS	1.2405	0.4592	1.6094	3.912
ENRL_PVT	0.6599	0.4738	0	1
STREAM_STUDY	0.6896	0.4627	0	1
SEC_MARKS	78.89	11.19	30.39	100
SEC_MEDIUM	0.1477	0.3549	0	1
LOAN	0.1034	0.3045	0	1
GENDER	0.2861	0.452	0	1
SC	0.0738	0.2615	0	1
ST	0.0187	0.1356	0	1
OBC	0.194	0.3954	0	1
OTHERS	0.7134	0.4522	0	1
*ln*HHY	12.3298	0.9623	10.8198	14.0387
FATHOCP_PROF	0.2	0.4	0	1
FATHOCP_BUS	0.2036	0.4027	0	1
FATHOCP_OTHERS	0.6	0.49	0	1
FATH_ED	14.5684	3.913	0	17
FIELD_EMPLOYMENT	0.1069	0.3091	0	1
TYPE_JOINT	0.3947	0.4888	0	1
TYPE_DOME	0.2703	0.4442	0	1
TYPE_FOREIGN	0.3825	0.4862	0	1

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South Africa as a Geopolitical Hub for Migration and International Student Mobility

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Abstract

This paper examines the rise of higher education within geopolitical hubs, based on the case of South Africa. South Africa has strategic geographic, economic, and political features that contribute to its emergence as a geopolitical hub. This paper discusses the concept of a geopolitical hub in the South African context based on three focus areas: (1) transport, trade, and tourism; (2) global and regional multilateral organisations; (3) peace and political stability; and (4) regional agreements. As we will explore, all these aspects have direct implications for international student mobility.

Keywords: Higher education, South Africa, student mobility

Introduction

The growth of regional higher education hubs is a rising phenomenon (OECD, 2014), but it is less understood in the context of the global mobility of international students. As more and more students seek international study opportunities (OECD, 2019), the factors that drive decisions to stay within one's home region cannot be fully attributed to geographical convenience. While the ease of transportation, cultural and language familiarity in one's home region may prove to be less daunting than traveling greater distances, there may also be national partnerships, government incentives, visa policies, and other geopolitical factors that contribute to within-region migration (Lee & Sehoole, 2015).

While the European Union is commonly given as the most prominent example of regional mobility, the phenomenon is also now occurring within the Global South. For example, of the 72,457 international students in South Africa in 2013, 65,719 (90%) were from within the African continent (Department of Higher Education and Training [DHET], 2013). Such inter-regional migration can benefit participating countries by maintaining highly skilled talent and resources within the region. In particular, Africa has long been positioned as a victim of 'brain drain,' with its human capital being lured to Western Europe and the United States (Zeleza, 2003). According to Lee and Sehoole, (2015), what is less noted, however, are the ways in which some African countries combat such trends by preparing and supporting international students within the continent, and in some cases, from beyond continental borders. This paper seeks to investigate both the regional and global mobility of international students, particularly the factors that drive and shape educational migration towards South Africa, using the geopolitical hub phenomenon as a framework.

We argue that the ability of South Africa to attract international students and the rapid increase in numbers – from 12,557 in 1994 (Kwaramba, 2012) to 72,457 in 2013 (DHET, 2013) – can be explained in terms of the country's emergence as a regional power and hub following its readmission to the international community after the democratic elections in 1994. South Africa has strategic geographic,

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economic, and political features that contribute to its emergence as a geopolitical hub (see definition in the following section). In this paper, we discuss the concept of a geopolitical hub in the South African context, based upon the role of South Africa in the following four focus areas: (1) transport, trade, and tourism; (2) global and regional multilateral organisations; (3) peace and political stability; and (4) regional agreements. As we will explore, all these aspects have direct implications for international student mobility.

We supplement our arguments with international student data gathered from student surveys and interviews in seven South African universities. The institutions range in type, setting and location. They include instances of each of the three university types (traditional research, comprehensive, and technology universities) and are located in urban and rural settings in the following provinces: Eastern Cape, Gauteng, Northwest, and Western Cape. In total, 1,682 international students completed the survey, and 51 students were interviewed. The full methods, including data collection and analyses, are in an article written by the authors (Lee & Sehoole, 2015). Selected tables and interview data are presented in this paper in order to elaborate on how the concept of South Africa as a geopolitical hub was experienced by international students.

The Concept of a Geopolitical Hub in the South African Context

We define a geopolitical hub as regional power resulting from natural causes (such as geographic location, or the presence of natural resources and minerals), and man-made infrastructure (such as shipping, rail, and air transport), based on the insights of Scholvin and Draper (2012). Scholvin and Draper (2012) propose that South Africa is an economic gateway to the African continent based on its location, physical geography, and extensive transport infrastructure, all of which reinforce the country's role as a geopolitical hub, which we will apply to South Africa's higher education sector.

South Africa's favourable elements provide economic as well as geopolitical benefits. As the following sections will demonstrate, South African politicians and business leaders have strategically used the country's geographic location as a magnet for direct foreign investment, an attraction for tourists and international students, a home for refugees and asylum seekers, and a strategic partner in regional agreements, all of which have contributed to the country's ascendency within the continent. This paper argues that South Africa's role in each of the four focus areas mentioned makes the country an ideal case to study in seeking understanding of the phenomenon of a geopolitical hub.

Geography as a Stage

Spykman (1942) conceptualizes geopolitics as a science that seeks to explain social phenomena as a result of natural causes; they address the geographical roots of economics and politics by studying the impact of location and physical geography on mankind. Building on this perspective, Scholvin (2011) shows how a geopolitical perspective provides insights that cannot be gained from a solely social scientific viewpoint. In seeking more insight into the notion of geopolitics, Fairgrieve (1917) distinguished between the "drama of the world history" and the "stage of the world history," showing how the stage shapes the drama. He argued that geography "controls" history by staging opportunities and posing constraints. Human action is possible only within the limits set by geography and often takes paths implied as rational by geography (Fairgrieve, 1917).

In elaborating on this proposition of geography as a stage in the South African context, consider for example, the presence of precious minerals in South Africa. The presence of precious minerals does not control humans in the sense of forcing them to industrialize a country. Only human decisions determine whether, when and how to extract these minerals (which are controlled by geography), thereby leading humans to industrialization. Nevertheless, the presence of the minerals was a necessary condition for industrialization and makes industrialization likely because the actions of humans are "conditioned by their surroundings" (Fairgrieve, 1917, p. 22).

South Africa's Stage

In his analysis of the impact of geography and geology on the emergence of South Africa as a regional economic power, Scholvin (2011) shows how the Gauteng province became the centre of economic

activity and helped South Africa become a continental power. The geology of South Africa is marked by vast quantities of precious minerals, including the Witwatersrand (rich with deposits of gold, manganese and uranium), which indicates a geographically-induced pattern of economic integration into Southern Africa. In other words, the geography of Southern Africa favours a continental African orientation for South Africa, not only because of favourable conditions such as transport, but also because of the precious minerals which follow geographical patterns. These factors in turn are fundamental to the existence of a regional mining-and-industry complex (Scholvin, 2011).

Rise of the Mining-and-Industry Complex

Scholvin (2011) concludes that geography has guided history in Southern Africa, for example, the quantity and quality of mineral resources discovered in South Africa laid the foundation for the rise of South African mining companies. Mining companies used the strength and resources they gained from exploring and exploiting vast local mineral reserves in order to expand throughout sub-Saharan Africa, exporting knowledge and expertise as they did so. Geography explains why South Africa was able to develop a manufacturing sector and export its products to the rest of the continent. Geology provided the necessary material basis for this path and induced it. This was complemented by strong support for national industries by the apartheid regime. The abundance of resources in South Africa induced the rise of the mining-and-industry complex. In addition, the country benefitted from man-made roads, tourism, telecommunications, and financial services that made South Africa a magnet for tourists, investors and road freight operators.

Effects of the Mining-and-Industry Complex

For the mining-and-industry complex and the transport infrastructure to evolve and develop into one of the best in the region, skills and expertise had to be developed and deployed. In this regard, higher education has played an important role in the development of not only the mining industry and transport infrastructure, but also in related industries like financial services, trade, telecommunications, and tourism. This paper supports previous writings on how industry and universities are inextricably linked (Slaughter & Leslie, 1997; Slaughter & Rhoades, 2004). In the case of South Africa, the growth and strength of mining engineering departments in higher education were attributable to that of the mining industry, with the industry investing in the universities, which in turn supplied skilled labour to the mining industry.

Effects on South African Universities

The mining and industrial complex laid the foundations for South Africa's most prominent universities. For example, the University of the Witwatersrand was originally the South African School of Mines, which was established in Kimberley in 1896, following the discovery of diamonds. In 1904 the school was transferred to Johannesburg and called the Transvaal Technical Institute. It became the Transvaal University College in 1906 and was renamed the South African School of Mines and Technology four years later. Thus, the emergence and history of the university was intimately linked with mining as the university-trained students and supplied skills for the industry. In return, the mining industry invested heavily in the university. Major mining houses such as the Chamber of Mines, GENCOR and Anglo American, and mining magnates such as the Oppenheimer family, have historically been associated with the growth and development of the university's Faculty of Engineering. These industry-university ties resulted in investment in infrastructural development and a number of new buildings erected at the university were named after prominent mining magnates.

Similarly, the University of Cape Town was initially established as the South African College in 1829. This high school for boys housed a small tertiary education facility, which grew substantially from 1880, around the same period of the discovery of gold and diamonds in Kimberly and Johannesburg, respectively. From 1880 to 1900, the college created the departments of Mineralogy and Geology to directly address the country's surge in demand for mining skills (https://www.uct.ac.za/about/intro/history). The South African College became a fully-fledged university by 1900, with investments from both the government and the private sector. The faculties of Engineering in these universities are still among the leading programs in the country.

International Student Mobility

Beyond national historical ties and mutual development, we argue that international student mobility is a key component in the today's knowledge economy. South Africa is home to globally ranked universities, including the University of Cape Town, the University of the Witwatersrand, and Stellebosch University, all of which are among the top 300 universities in the world (Times Higher Education, 2020). Thus, the country attracts a good number of international students from around the world, particularly from the Southern Africa region, pursuing Engineering degrees. The DHET (2013) data (see Table 1) shows that about 7,225 African students studying in South Africa were enrolled for different Engineering degrees; of which 5,505 were from the Southern African Development Community (SADC) region and 1,720 from other African countries. The table further shows enrolments in engineering specialisations: mechanical, metallurgical, and mining. These subfields are relevant to the discussion of emergence South Africa's mining industry and its expansion to the African continent, demonstrating the role the country is playing in human resources development on the African continent.

Table 1. Number of international students (African) studying engineering

Region	Engineering	Mechanical Engineering	Metallurgical Engineering	Mining Engineering
SADC	5,505	891	126	219
Other African	1,720	299	32	39
Total	7,225	1 190	158	258

Source: DHET (2013)

South Africa as a Geopolitical Hub

We now explore the concept of a geopolitical hub in the South African context, based upon the role of South Africa in the following four focus areas: (1) transport, trade, and tourism; (2) global and regional multilateral organisations; (3) peace and political stability; and (4) regional agreements.

The Role of South Africa in Transport, Trade and Tourism

Transport: Economic integration in Southern Africa would not have been possible without transport. According to Scholvin (2011), from the time that Southern Africa was first connected to the European economy via harbors and railway lines during the colonial era, most of Europe became highly dependent on South Africa as a direct trading partner – and as a gateway for extra-regional trade. As Odén (2000) points out, the capacity for inland transport and shipping to the rest of Southern Africa is most efficient in South Africa, with its network of railway lines and roads connecting landlocked countries to South African harbors. Building the transport infrastructure (i.e., railway lines and roads) was facilitated by South Africa's topography consisting of plains, which made it easier to build upon than having to navigate mountain ranges, vast rivers, or dense forests.

Just as its transport infrastructure connects South Africa to Southern Africa, and therefore facilitates trade within the region, it also contributes to South Africa being attractive, and providing easy access for tourists and students from the Southern Africa region. South Africa has the biggest airport on the continent that not only links the country to the region and to the rest of continent, but also to the rest of the world. The three major airports in South Africa (located in the cities of Johannesburg, Durban, and Cape Town) together process about 32.3 million passengers and 333,000 air traffic movements per year (Government Communication and Information System [GCIS], 2013; 2014). Such diverse means of access provide South Africa with exposure that contributes to attracting international students considering further study.

Trade: The reputation of South Africa's economy, including the domination of Johannesburg Stock Exchange (JSE) in relation to its peers in the region, makes it a destination of choice for international investors. The volume of trade (exports and imports) from South Africa's neighbouring countries supports the thesis that geography matters. South Africa is a key trading partner, especially in terms of imports into Botswana, the Democratic Republic of Congo (DRC), Lesotho, Malawi, Mozambique,

Namibia, Swaziland, Zambia, and Zimbabwe. The dominance of South Africa as a source of imports for most countries in Southern Africa correlates with the expansion of the South African private sector into those countries. South African telecommunications firms, tourism companies and financial services providers have gained dominant positions, not only in Southern Africa, but also in the most lucrative markets of East and West Africa (e.g., Ghana, Kenya, and Nigeria) (Games, 2003).

Moreover, South Africa has experienced an increase in overseas foreign direct investment as exemplified by the acquisition of local companies by multinational corporations (MNCs). This strategy, to control the regional networks that South African companies have built over the years, has proven to be highly successful. Examples over the past decade include the acquisitions of Massmart Holdings by Walmart; of Absa Bank by Barclays Bank PLC; and of Vodacom by Vodafone in the retail, financial services, and telecommunications sectors, respectively. By purchasing South African enterprises and their regional networks, such MNCs have turned South Africa into a major economic hub.

Investment growth and sustainability in the abovementioned sectors require a robust higher education system that is able to supply the requisite human resources. In his study, Kwaramba (2012) argued that a powerful factor in student demand for international qualifications is employer demand for skilled labour that is geographically and culturally flexible. With products and services now being delivered across borders, students obtain much higher returns on their international education investments than in years past. The policies of sending and receiving countries also play a significant role in encouraging different modes of trade (Bashir, 2007). This demand for international qualifications has contributed to African students seeking to study in South Africa, which provides a diverse environment and more opportunities to work in multinational teams. Kwaramba (2012) further showed that the knowledge and skills requirements of global firms shape student demand for higher education. In fact, the DHET (2013) data demonstrates that Business and Commerce faculties in South Africa enrolled more students from the SADC region (34%) than Science, Engineering, and Technology faculties (30%).

The country's strong economy can be linked to the reputation and high standing of South Africa's higher education institutions in the rest of Africa. Exposure to multinational corporations and international perspectives influence the choice of international students to study in South Africa, thus contributing to the geopolitical hub phenomenon. One international student reflected on his choice of South Africa and the institution he studies at, in the following words: "The LLM International Trade and Investment Law in Africa is a unique course, and the method of delivery of lectures was particularly unique. This course (combining Trade and Investment) is not offered elsewhere on the globe."

Tourism and international study: South Africa's developed transport infrastructure facilitates the country's position as the leading African tourist destination (World Economic Forum, 2015). According to South Africa's Department of Transport (DT, 2014), the number of international arrivals in South Africa reached an all-time high of 14,860,216 in 2013, an increase of over 10% from the previous year – a rise of 2.5 times the global average. The vast majority of these visitors were tourists (9.6 million), which also increased compared to the previous year (9.2 million). Such initial exposure can serve as a gateway for international study. For example, when asked why he chose to study at a particular South African university, one of our interviewees said: "I have been to South Africa several times as a student and visitor." Another commented, "I visited South Africa prior to my coming to study here. It is a beautiful country and the coast in particular spoke to me. The general atmosphere of Port Elizabeth living also appealed to me." Clearly, exposure to South Africa as a tourist had an influence on these and other students in choosing to study in the country.

Europeans comprised the largest group of tourists, with a 7% increase to 1,494,978 tourists in 2013. During that year, the United Kingdom (UK) was South Africa's biggest overseas tourism market with 442,523 UK tourists visiting. The United States of America (USA) was South Africa's second biggest market, with 348,646 tourists, followed by Germany with 304,090 tourists. China was South Africa's fourth biggest overseas market at 151,847 tourists in 2013 (up by 14.7%), followed by India (up by 5.5% to 112,672 visitors) and Brazil (up by 5.6% to 82,802 visitors) (DT, 2014).

The growth of tourists from Brazil, India and China could also be the result of South Africa's admission into the membership of BRIC (Brazil, Russia, India, and China) countries in 2010 (thus, forming BRICS). The alliances between these countries benefit not only tourism and trade, but also educational opportunities since travel and ease of access by nationals of these countries to other member countries is facilitated. In terms of higher education, India and China were the two biggest senders of international students from Asia to South Africa in 2013, a trend that is similar to their mobility to the United States (Institute of International Education [IIE], 2019). A student from India explained his reasons for studying in South Africa, which are related to opportunities offered by BRICS countries, in the following way: "It's [South Africa] an emerging market and lots of opportunities will be there in future. This is the number one MBA institute in Africa. Being from India, it gives me the opportunity to explore one of the BRICS nations and I will be in the position to do a job when foreign trade between India and SA is there."

The largest combined source of tourism, however, is from the African continent. International arrivals in South Africa from other parts of Africa were 6,889,389 in 2013, an increase of almost 4% compared to the previous year. Nigeria accounted for the largest source of tourists to the South Africa, growing by 15.4% to reach 84,589 tourists in 2013. The impressive increase of tourists from Nigeria coincides with Nigeria's position as a leading sender of international students from outside the SADC region, which amounted to 3,386 in 2013 (Lee & Sehoole, 2015).

The Role of South Africa in Global and Regional Multilateral Organisations

South Africa is as a member of the G-20 countries of the International Monetary Fund (IMF) and has participated past summits of the Group of Eight Industrialised countries (G-8) (GCIS, 2004). Its membership of and participation in these influential global institutions has bolstered South African exposure, attracting further attention, and elevating the country's standing in the world.

At a continental level, South Africa played a critical role in the restructuring of multilateral organisations and the development of programs for the recovery of the African continent. This position was made possible by the readmission of South Africa to the United Nations (UN) in 1994, following its successful transition to democracy. Twelve years after re-admittance to the UN, South Africa was elected to serve as a non-permanent member of the United National Security Council (UNSC) for the 2007/08 period, which was renewed for a second term in 2011/2012.

Under the leadership of former president Thabo Mbeki, South Africa played a leading role in the transformation of the Organisation for African Unity (OAU) to the African Union (AU), which became the political and economic fulcrum for Africa.
Among the OAU's goals are to

> … promote the unity and solidarity of African States; co-ordinate and intensify their co-operation and efforts to achieve a better life for the peoples of Africa… giving due regard to the Charter of the United Nations and the Universal Declaration of Human Rights; and co-ordinate and harmonise members' political, diplomatic, economic, educational, cultural, health, welfare, scientific, technical and defense policies. (http://www.dfa.gov.za/foreign/Multilateral/africa/oau.htm)

Similarly, South Africa played a key role in the development and adoption of the New Partnership for African Development (NEPAD), which became the blueprint for Africa's economic recovery.

The Role of South Africa in Peace and Political Safety

The emergence of South Africa as a geopolitical hub has also been boosted by the meaningful diplomatic and leadership role it plays in the region, the continent, and the world. Thus, it is no surprise that South Africa has risen in popularity as a destination for various participants seeking to benefit from opportunities in the business, education, or tourism sectors, and those applying for refugee or asylum status.

South Africa has contributed significantly to foreign policy and promoting regional peace, security, and stability, all of which have supported socio-economic development on the continent. Since becoming a democracy, the country has engaged in peacekeeping operations and has actively engaged in mediation or facilitation for other African countries such as Burundi, the DRC, Sudan, Ethiopia-Eritrea, Côte d'Ivoire, Madagascar, and Zimbabwe (GCIS, 2013; 2014).

Resulting from its membership in the UN and OAU, which embrace the culture of human rights, South Africa became a signatory to a number of conventions. In 1998, South Africa passed the Refugees Act, which established protection to those fleeing persecution and instability in other countries. According to the United Nations High Commissioner for Refugees (UNHCR), South Africa has a "liberal asylum legislation that incorporates all basic principles of refugee protection including freedom of movement, the right to work and access to basic social services" (UNHCR, 2013, p. 1). Refugees and asylum seekers are thereby granted access to health facilities, schools, and social services.

South Africa quickly rose in stature from a country where people were fleeing persecution to becoming a leading destination for new asylum seekers. Almost 900,000 individuals filed applications for asylum or refugee status globally in 2012 (The United Nations High Commissioner for Refugees [UNCHR], 2012). Among the 70,400 asylum claims, the USA was the world's largest recipient, followed by Germany, South Africa, and France. Within South Africa, Zimbabweans comprised more than half the number of applications seeking asylum between 2009 and 2012 (UNCHR, 2012, p. 23).

The inward flow of migrants into South Africa as refugees or asylum seekers also provides evidence of international student mobility[1]. For example, given the political instability in Zimbabwe over the past 15 years, there has been an influx of Zimbabwean refugees into South Africa. As with the asylum-seeking rate, in 2013 Zimbabweans constituted more than half the number of international students from the SADC region, and about 40% of the number of all international students in higher education institutions in South Africa (DHET, 2013).

Interviews with international students highlighted how they have used their refugee status to gain access into higher education, as the following quotations show:

> I am a refugee student; I grew up here and spent all my academic years (primary to university) in this country.
> I am a Rwandan refugee who fled the country for political instability, human rights abuse, and insecurity. I became a student as an alternative for life.
> I came to South Africa because I had no choice, as my life as well as those of my children, was in danger for political reasons. (Lee & Sehoole, 2015, pp. 827-843)

The Role of South Africa in Regional Agreements

The geopolitical role South Africa plays in the region and on the continent, particularly in the higher education context, is perhaps most directly attributable to governmental cooperation agreements to facilitate trade and migration. South Africa joined the Southern African Development Cooperation (SADC), which is a constellation of Southern African countries united by the common purpose to bring an end to colonial and white-minority rule in southern Africa. According to Evans (1984), the rationale for SADC was driven by regional cooperation in the quest to end colonialism and pursue national liberation more so than economic, diplomatic alliance, and security concerns. SADC also aims to further socio-economic cooperation and integration, as well as political and security cooperation among the 15 southern African states. These joint goals further strengthen the African Union and its purpose.

Following the attainment of freedom and independence of all the SADC countries, there has been a growing emphasis on an economic agenda, with the initiation of the SADC Free Trade Area in 2000 (Sehoole & De Wit, 2014). Late, in 2008, SADC joined the Common Market for Eastern and Southern

[1] In terms of the Refugees Act of 1998 an asylum seeker in South Africa who is a holder of a Section 22 permit has the right to work and study and is protected against deportation to his country of origin. (http://www.home-affairs.gov.za/index.php/refugee-status-asylum)

Africa (COMESA) and the East African Community to form the African Free Trade Zone, which includes all the member countries of each organization. The African Free Trade Zone aims to strengthen the bloc's bargaining power when negotiating international deals (Sehoole & De Wit, 2014).

SADC countries further signed a regional cooperation agreement in the field of education, called the SADC Protocol on Education and Training, which aims to develop harmonized, and eventually standardized policies on education and training. The SADC Protocol identifies areas of cooperation as follows: basic education, intermediate education and training, higher education and training, research and development, life-long education, and publishing and library resources (SADC, 1997). The Protocol further gives guidance on institutional arrangements for implementing it, as well as managing resources and scholarship fund assets.

One of the provisions of the protocol on higher education is that students from member states are treated as home students in terms of fees. This enables increased student mobility and provides further incentives for students to study in higher education institutions in member states. Governments have also used this provision to provide scholarships to their nationals to study in the universities of other member states. It appears that South Africa has been a beneficiary of this provision as attested to by data that show that some SADC students came here through the support and encouragement of their governments. The following quotes from students support this assertion:

> South African universities are the best in Africa and since I had received the scholarship from my government to study in RSA, I could not resist.
> [For me to study in South Africa was] chosen by my home government, probably cheaper for the home government.
> I came to study here because of the economic situation back home. I was given the opportunity by a government scholarship, so I came to study in South Africa. (Lee & Sehoole, 2015, pp. 827-843)

Furthermore, within SADC, the Southern African Regional University Association (SARUA) was established in 2005. This is a not-for-profit leadership association of the heads of the public universities in the 15 countries of the SADC region (Kotecha, Wilson-Strydom, & Fongwa, 2012). Its mission is to promote, strengthen and increase higher education, research and innovation through expanded inter-institutional collaboration and capacity-building initiatives throughout the region. As part of responding to national development needs and in order to address the need to transform the institutional cultures in South African universities, the National Plan for Higher Education (NPHE) (NPHE, 2001) was implemented. It encourages higher education institutions to recruit postgraduate students from the rest of the African continent, and in particular from the SADC region. To ease the process, the NPHE declared that "postgraduate students, irrespective of their countries of origin, would be treated as South African students for subsidy purposes" (NPHE, 2001 – Section 5.3). This led to a situation where in 2006, "61% of the African male graduates and 48% of the African female graduates were not South Africans" (Herman, 2011, p. 12).

As the data reported in this study shows, South Africa has been playing an important role in capacity building in the Southern African region. In so doing, it enables the regional higher education sector to respond meaningfully to the developmental challenges it faces, it consolidates a Southern African agenda for higher education, and it enables higher education to make a significant contribution to national and regional development.

In summary, this paper has made a case for the factors that contribute to South Africa emerging as a geopolitical hub in the Southern African region. These factors relate to the geography of the country, including its location and geographical infrastructure, its emergence as a destination of choice for international investors, its developed transport and telecommunication infrastructure, which among other things, contribute to the phenomenon of the country being a geopolitical hub. This paper also demonstrates that higher education development and internationalization do not occur in isolation, but are largely facilitated by economic, geographic, and political forces. Future research projects might study and contextualize these factors in more detail. Our concept of higher education systems within a geopolitical hub can be useful in examining international higher education in other regions.

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Trends in Governance and Management of the Malaysian Academic Profession (2007-2013): Evolution or Devolution?

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Abstract

This article analyses the academics' role in the (shared) governance of the Malaysian higher education system over a period of five years (2007 – 2013). The aim is to provide a perspective of how Malaysian academics perceive the governance and management practices based on data from two similar studies of the Changing Academic Profession (CAP) in 2007 and 2013. Findings reveal that the academics clearly consolidated their hold over personnel decisions. However, the mid-level management maintained the control of decisions in areas related to the regulation of academic work. Furthermore, the respondents in the 2007 and 2013 studies acknowledged having little influence in determining institutional policies at the school/faculty and institutional levels. In the areas of selection of administrators and approval of new programmes, top management and boards retained their primary influence. While the quality of communication seemed to have improved since 2007, the academics' perceptions of a stronger performance orientation, top-down management style and bureaucracy over the five years reflected the continued strength of the market coordinated system in the Malaysian higher education system. Middle management appeared to have made inroads in the management and governance of HEIs. The paper concludes by proposing a number of initiatives for ensuring that shared governance is effectively implemented in higher education institutions.

Keywords: decision-making, Malaysia, management, shared governance

Introduction

The evolution of higher education in Malaysia, as in other countries around the world, is dynamic and continues to be challenged on a number of fronts such as cultural shifts, student and academic demography, reduced funding, the influence of technology, globalization, and internationalization (Altbach, 2010; Kaur & Manan, 2010; Sirat, 2010). In addition, the system is influenced by a number of external and internal constituents including various government agencies, industries, governing boards, administrators, academics, students, alumni, and accrediting bodies and associations. Various reforms in government policies targeting the higher education system aimed at strengthening higher education institutions' (HEIs) governance and management have been implemented since 1996, including the Private Higher Education Act, 1996, the National Council on Higher Education 1996, the National Accreditation Board Act 1996, and the University and University Colleges (Amendment) Act (UUCA) 1996. The passing of the Acts in Parliament highlights the evolution and liberalization of the Malaysian higher education governance, the commercialization of the academic activities as well as the establishment of a regulatory framework to monitor the HEIs (Hambali, Faruqi, & Abdul Manan, 2009; Taib & Abdullah, 2015). The National Higher Education Strategic Plan (2007-2020) and its accompanied action plans (2007-2014), the quality assurance system such as the Malaysian Research Assessment (MyRA) and the Teaching and Learning Rating System for Malaysian Higher Education System (SETARA), and the most recent, the Malaysian Higher Education Blueprint (MHEB 2015-2025) further strengthen the idea of corporatization to enhance efficiency and efficacy of HEIs through

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institutional autonomy, managerialism, marketization, competition and total quality management (Azman, Jantan, & Sirat, 2011; Azman, 2019; Mok, 2007).

Prior to 1996, the government was seen as exercising a minimal influence in the running of HEIs and the development of higher education in general (Md Taib & Abdullah, 2015). Public HEIs were governed by the UUCA and the government only took mild and relaxed changes in liberalising the public universities. The liberalization of higher education was more focussed on the public HEIs as more private institutions were needed to cater for the rising needs for tertiary education. However, after 1996, neoliberalism and New Public Management (NPM) emerged as the primary mechanisms through which the whole system of higher education reforms are enacted. The basic principle of NPM is increased competition among and within universities for resources, students, and national as well as international standing (Santiago, Carvalho, & Cardoso, 2015). In order to achieve competitiveness, the Malaysian HEIs deregulate, create new leadership strategies, and accept new market-based interventions. These resulted in the concentration of executive powers at the top, a decentralized operational management, and the replacement of the collegial-based with output-based governance. Key Performance Indicators (KPIs) became the main instrument used to promote a new organizational order among HEIs (Azman, 2019; Azman et al., 2011). In addition, along with the steadily decreasing public funds for higher education, the reforms include countless schemes to regulate academic work, promotion, and funding system. In essence, the Malaysian higher education system is claimed to be both evolving and devolving.

In the process of growth, development, and seemingly, of devolution of HEIs, both external and internal influences, and the new reforms continue to create unique sets of complex problems for Malaysian academics (Azman, 2019; Azman et al., 2011; Lee, 2004; Mok, 2008). The government's effort to provide semi autonomy to institutions, while providing flexibility for individual institutions to govern, has instead somehow strengthened the power of the executive authorities, especially the governance board and the top management (Wan Abdul Manan, 2008; Sirat, 2010). This change reduces collegiality and limits academics' freedom over decision-making practices (Azman, 2019; Azman et al., 2011). Consequently, the academics' decision making, and professional roles is slowly being taken away by the administrators or managers. As such, academics have increasingly become 'managed academics' (Azman, 2019; Santiago et al., 2015), more regulated and regimented through a plethora of accountability systems (Mok, 2007; Santiago et al., 2015). Subsequently, these changes have brought about new set of principles and values in responsibilities of, and roles for academics (Md Taib & Abdullah, 2015; Azman, 2019).

As evidenced by limited available studies, Malaysian academics seem to have acted differently in response to the aforementioned changes, taking on different attitudes ranging from non-consensus/resistance to adjustment, including hybridization and agreement/conformity. For example, in relation to performance targets used to regulate their work, teaching and learning audits and research output, some academics were found to comply with the reforms while others utilized the reform to reap positive effects by increasing productivity (Azman & Kutty, 2016; Harun & Komoo, 2020). Some have developed coping strategies to avoid negative effects while some others use 'gaming strategies' (Azman & Kutty, 2016; Harun & Komoo, 2020). Arguably, the management of academics by using performance targets set by the various national quality assurance systems has changed the distribution of power and values within academe and created an environment where academics have more vested interest in the output as they are not held accountable for the processes and practices anymore. The risk of these reactions is a disregard for institutional core values, commitment to mission, and long-term perspective that is unique to institutions of higher education (Azman, 2019; Birnbaum, 2004). This may also reflect the emphasis on managerial values over professional ones with the academics losing control over both the goals of their work practices and their technical tasks. The question of management and academics' attitudes towards shared decision making generates a concern for the future of shared governance in the Malaysian HEIs (Azman, 2019; Mok, 2007). Examining the literature on good governance in the Malaysian higher education system, it is evident that limited studies have focussed on the academics, especially in terms of how they perceive their decision-making practices, or the concept of shared governance. Thus, it remains unclear what role academics play in any shared decision-making, and to what extent they might value a participatory decision-making environment.

The present study examines the trends in Malaysian academics' perceptions on three related areas: the employment of organizational power, that is, the most influential actors involved in decision-making processes in academics' work; the involvement of academics in the decision of institutional policies; and the dominant management model. The data from this study is specific to the relationship between the governance, structure, and shared decision-making in HEIs, with a focus on academics' perspectives. The findings will contribute towards understanding how academic staff perceive their role in the shared governance process, and hence better inform policy makers about the importance of academic decision making in institutional governance. In addition, policy makers can use this information to make policies that will necessitate academics' active participation in decision making in areas where they should partake on. This study will greatly enhance the small body of literature currently available on the topic of academic governance and, more specifically, on Malaysian HEIs' academics' involvement in institutional governance.

The rest of this paper is structured as follows. The concept of shared governance and the roles and structures in internal governance is briefly discussed, followed by an overall brief synthesis of the Malaysian higher education system and the academic profession in the third and fourth sections. A description of the methodology follows, specifically, the use of data derived from the Malaysian version of the 'Changing Academic Profession' (CAP) (2007) and the Malaysian Academic Profession (MAP) (2013) surveys. The sixth section comprises the analysis of data, depicting the trends in the perceptions of academics on decision making between 2007 and 2013 including similarities and differences. Finally, the major conclusions of the trends are offered along with suggestions for strategic initiatives and for advancement of knowledge in this field.

Roles and Structures in Internal Shared Governance

This section focuses on the institutional level governance structures that shape the internal governance process. Internal governance refers to the decision-making processes of an institution, as well as institutional policy (Moran, 2012). Unlike day-to-day management decisions and processes, the governance of an HEI is concerned with determining the mission, purpose and strategic planning of the institution, resource allocation, academic planning and policy, among other decisions (Johnson, DuVivier, & Hambright, 2017; Kaplan, 2006). The locus of this governing authority is the unique concept of shared governance, which has been a defining feature of HEIs for centuries (Bowen & Tobin, 2014; McGrane, 2013).

Shared governance can be characterized as anything from a shorthand for faculty participation in decision-making (Schwartz, Skinner, & Bowen, 2009) to full-fledged power sharing involving the entire HEI community (Austin & Jones, 2016). It is a broad, over-arching term that describes the system by which different members of HEI communities come together to help with institutional decision-making. In defining shared governance, Birnbaum (2004) highlights the prominent role of academics by describing shared governance as a "generally accepted normative principle" (p. 16) with an expectation of academic staff playing a preeminent role. Others describe shared governance in the form of faculty representation in institutional decision-making (Nadler, Miller, & Modica, 2010). Flynn (2005), Crellin (2010) and Moran (2012) describe shared governance as the collaborative responsibility among various parties for primary decisions about the general institutional policy. The parties typically involved in the sharing include the academics, the administration, and the board of trustees and students. Each of these groups of stakeholders brings its own unique perspective to what they consider the ideal or most appropriate approach to governance in higher education.

There are variations in the models of shared governance used in higher education. Generally, there are three fundamental assumptions that institutions should use as principles in guiding their shared governance environment: (a) governance should result from the interdependence and support from the various governance sections; (b) shared governance and academic freedom are inseparably connected; and (c) academics' involvement in governance is an ethical commitment (Ramo, 1997). The four main functions of shared governance include facilitating faculty contribution in management; providing a forum for debate to discuss organizational matters; gaining an understanding of educational goals; and creating a statement of professional ethics (Birnbaum 2004; Austin & Jones, 2016). The aim of the

shared governance mechanism is to foster institutional growth, higher education excellence, and the freedom of scholarly thought and expression (Austin & Jones, 2016).

Significant research literature has demonstrated that an HEI's success may be determined by academics' participation in institutional governance (Jones, 2012; Shattock, 2013; 2014) as scholars have found that: faculty involvement affects the academic quality of an institution (Carroll, Dickson, & Ruseski, 2013; Taylor, 2013); lack of faculty governance reduces academic freedom and trust; and lack of power sharing can lead to an institutional uproar (Bucklew, Houghton, & Ellison, 2012). Research also indicates that shared governance helps maintain academic excellence for HEIs (Taylor, 2013) and that it protects institutions from political trends and safeguards the stability of the institution from unjustified control of any one group of people (Nelson, 2010). Hence, studies have found that more than 80 percent of HEIs in North America believe that shared governance is important, and many academics and administrators consider shared governance as a pivotal element of higher education (Austin & Jones, 2016; Jones, 2012; Tierney & Minor, 2003).

However, academic involvement in shared governance has significantly declined in the last few decades. Heaney (2010) blames this on the lethargic pace of decision-making when academic staff are involved in the process. Pierce (2014), for instance, questioned whether the structures of shared governance can meet the challenges facing HEIs as the processes of shared governance were found to be slow and ineffective. Moreover, due to delays in decision-making, some HEIs tend to experience static progression especially when they are expected to make rapid changes to various aspects of their institutions (Stensaker & Vabo, 2013). Other scholars claim that academic staff are not interested enough in being part of the process or informed to the degree to be qualified to make decisions necessary for their institutions, particularly in responding to market demands (Bok, 2013; Gerber, 2014). Critics of shared governance also contend that a narrowly focused academic staff is unable to manage institutional affairs and as such, HEIs need to be governed by professionals who are trained and experienced in corporate policy and planning (Leach, 2008; Sheets, Crawford, & Soars, 2012; Trakman, 2008). Another problem with shared governance is that it involves many stakeholders with different agendas. Nevertheless, findings regarding the importance of shared governance persistently claim that it is important to have a governance model for HEIs which operate as a loosely coupled system as, throughout history, the most highly regarded and successful HEIs have been the institutions that employed shared governance and granted academics a primary role in decision-making (Gerber, 2014; Taylor, 2013; Tinberg, 2009). Thus, as a compromise, some scholars have advocated that HEIs should seek a balance between corporatism and collegiality with a consistent accommodation of shared governance (Dearlove, 2002; Harman & Treadgold, 2007).

Considerable variation is evident in shared governance concepts and definitions, its practices and influence across institutional types, context and culture. The present study is not grounded in any one prescribed definition of shared governance, but rather assumes a great variation both in terms of higher education systems and settings over time. It is expected that internal governance processes have a certain amount of fluidity given the nature of HEIs, culture and politics of the system (Maassen, 2017).

The Malaysian Higher Education System

The Malaysian higher education system is made up of both public and private institutions. The public sector of higher education comprises 20 public universities (established between 1962 and 2007), 36 polytechnics, and 94 community colleges. The private sector includes 47 private universities, 10 foreign university branch campuses, 34 private university colleges, and 347 colleges. The Ministry of Higher Education (MoHE) co-ordinates and monitors the activities of public and private HEIs.

The Universities and University Colleges Act of 1971 is the main legislative structure that governs public universities in Malaysia. It bestows the government with full power over student enrolment, staff appointments, educational programmes, and financing. As public universities expanded in magnitude and form, administrative practicality necessitated the regulation of guidelines and procedures, both at the MoHE and university levels. The Universities and University Colleges Act of 1971 was amended in 1996 to restructure the public universities in terms of corporatization of their governance. Corporatized

public universities are allowed to participate in business ventures, collect and grow endowments, establish companies, and procure and hold investment shares (Lee, 2002). These corporate universities are expected to be managed using a market-based approach by minimising cost, increasing efficiency and profits.

In 2007, five of the 20 public universities were designated as Research University (RU) status which entitled them to receive additional funding for research development and commercialization. The remaining 15 public universities were either classified as comprehensive or focussed universities. Comprehensive universities are large universities that offer a wide variety of programmes while the focussed ones are smaller universities that maintain special assigned niches such as marine science or entrepreneurship. In Malaysia, most focussed universities specialize in technical and vocational education training (TVET).

Private higher education institutions were officially recognized in Malaysia in 1996 with the enactment of the Private Higher Education Institutions Act (PHEIA) 1996. This act authorizes the founding of degree-awarding private universities and the founding of branch campuses by foreign universities. It also warrants private colleges to conduct their courses in English with the approval of the Minister of Higher Education.

A somewhat comparable hierarchical model exhibiting a top-down approach is apparent in the governance and management organizations of both public and private universities. The hierarchy of academic organization ranges from Vice-Chancellor/President at the university-wide level, assisted by Deputy Vice-Chancellors/Deputy Presidents, Pro Vice-Chancellors, and Registrar and Bursar, at the senate comprising academics and administrators, and at the level of particular faculties and schools, Deans and Heads of Department.

The Malaysian Academic Profession

The academic profession in Malaysia is relatively large and not very competitive (Azman et al., 2016). The number of academics employed in both public and private universities in Malaysia rose from 39,153 in 2007 to 66,627 in 2015. Between 2007 to 2015, private universities had a total increase of 53.2 per cent with 16,270 academics employed in 2007 to 34,750 in 2015 (MoHE, 2015a). As of December 2018, 31,528 academic staff were employed in the public universities and 14,716 academic staff in private institutions. A total of 7,281 and 2,764 academics are employed in the polytechnics and community colleges respectively (MoHE, 2018).

Academics in private universities are employed on a tenure basis while those in public universities hold permanent appointments as civil servants ending with retirement. The legal status of civil servants is based on the Public Services Statute (UUCA, 1971; 2009). As civil servants, academic salaries are similar across all universities and are not considered high. While part-time appointments are still rare in public universities, private universities retain a more moderate association between full-time and part-time employment. However, no statistics are available on part-time academics employed by both public and private universities.

Full time academics in Malaysian HEIs generally hold one of four academic ranks: lecturer, senior lecturer, associate professor, and professor. The academic population has a relatively bottom-heavy structure as nearly three quarters of academics (74.2%) are of lecturer and senior lecturer status. For the 2015 academic year, women comprised 44.1 per cent of all academics. However, the number of female academics at public universities is growing; more than half (53.6%, or 17,081) are women. Conversely, women academics are not well represented in the private universities; only 35.4 per cent of academics (12, 289) are female (MoHE, 2015a). In most public universities, only candidates with doctoral degrees can be hired directly as lecturers. Out of 31,528 academics employed by the public universities, 43.7 per cent (13,925) hold doctoral degrees whereas only 14.9 per cent (1,331) of academics in the private universities have doctoral qualifications (MoHE, 2018).

Purpose

This paper will highlight analysis intended to provide a perspective on the academic role in institutional governance in the period between 2007-2013 in Malaysia. This paper addresses three specific dimensions of governance:

i. Academics' perceptions of which group of stakeholders exerted major influence over decisions on academic promotion and leadership appointment, budget priorities, new academic programmes and evaluation of key academic roles;
ii. Academics' perceptions of the influence they exerted as individuals on their department/centre, faculty or school (the larger academic units to which their department or centre belongs to) and their institutions;
iii. Academics' general perceptions of the competence of leadership in terms of communication style and management approach and practices.

Methods and Procedures

The datasets from the studies on the Changing Academic Profession (CAP) in 2007 and the Malaysian Academic Profession (MAP) in 2013 provide statistics on a variety of measures for academics in HEIs. The CAP study is an international survey of the academic profession that has been employed in 24 countries. The survey requires a large sample of academics in each of the participating countries to complete a set of questionnaires. The CAP uses cluster sampling: each country decides the main categories of HEIs in its national setting and selects institutions (clusters) randomly from each category of institutions which would be surveyed in their totality, i.e., all academics at chosen institutions would be considered to complete the questionnaire. The questionnaire examines the following constructs: demographic background, teaching activities, research activities, community involvement, internationalization, and institutional management and governance. The survey provides data about the collective value system of the academic profession.

The MAP study replicating the CAP 2007 study commenced in 2011 and data collection concluded in 2013. As the study used the same questionnaire as that used for the CAP study with the same sampling method, the data should, in principle, be resultantly comparable. The four dimensions of governance and management addressed in this paper are those addressed in both the 2007 CAP and 2013 MAP surveys, thus allowing for direct comparisons of responses over a five-year period. Data for both CAP and MAP were collected via email and snail mail. The survey was linked with an individually coded identifier with a copy of the letter of invitation and emailed, while a paper version was mailed to all the respondents. The CAP project decided on an effective completed sample of 800 for each participating country. The reliability and validity of the surveys were assessed utilizing several different combination clusters of academics. Internal consistency reliability was calculated from the responses of 1,100 in CAP 2007 and 1,822 in MAP 2013. The internal consistency (Cronbach Alpha) of the item was 0.95 (MAP 2013) and 0.91 (CAP 2007) respectively.

Table 1. Respondents for CAP (2007) and MAP (2013) based on university types

Types of University	MAP 2013	CAP 2007
Public university	1,248 (68.5%)	746 (67.8%)
Public university college	0 (0.0%)	79 (7.2%)
Private university	477 (26.2%)	157 (14.3%)
Private university college	97 (5.3%)	109 (9.9%)
Private college	0 (0.0%)	9 (0.8%)
Total	1,822 (100.0%)	1,100 (100.0%)

The selection of sampling for both the CAP and MAP surveys used the combination of cluster (university types: public university, public university college, private university, private university college, private college) and stratified sampling (discipline, academic rank, and gender). Having determined the proportion of academic staff in the population of HEIs, a random sample of academics was selected within each institutional stratum so as to approximately reflect them proportionately (Table 1). This approach yielded a total sample of 1,100 in CAP 2007 and 1,822 in MAP 2013 (Table 2), which

represents 4.9 and 5.7 per cent of the target population, respectively. Basic frequencies and means were computed on the four dimensions addressed in this paper.

Table 2. Respondents for CAP (2007) and MAP (2013) based on academic rank

Academic Rank	MAP 2013			CAP 2007		
	Male	**Female**	**Total**	**Male**	**Female**	**Total**
Professor	92	32	124 (6.8%)	50	20	70 (6.4%)
Associate Professor	131	75	206 (11.3%)	107	65	172 (15.6%)
Assistant Professor/Senior Lecturer	266	277	543 (29.8%)	105	93	198 (18.0%)
Lecturer	392	402	794 (43.6%)	313	345	658 (59.8%)
Tutor	71	67	138 (7.6%)	0	0	0 (0.0%)
Others	5	12	17 (0.9%)	0	2	2 (0.2%)
Total	957	865	1,822	575	525	1,100

Findings

Perceptions of Stakeholders' Influence

Both the CAP and MAP surveys posed similar questions on a series of decision-making areas (selecting key administrators, academic appointments, approving new programmes, etc.) by key stakeholders. For this dimension, four decision categories considered to be representative of decisions from entirely personnel and curricular to administrator selection (the typical domain of the academics) were sought to compare the responses in 2007 to those in 2013 by these groups of stakeholders: academics (including individual academics, academic committees, and the senate), middle managers (deans and department chairs), and central administration (top management leaders, boards and external groups). The results are displayed in Figure 1.

In terms of faculty personnel related decisions (selection of new academics, academic promotion, and tenure), a clear pattern emerged. According to the data, by 2013, the academics had gained influence in personnel decisions. Between 2007 and 2013, the academics had achieved influence (from 4.5% to 49.7%) in choosing new faculty members, making decisions on faculty promotion and tenure (7.9% to 43.1%) as well as in approving new academic programmes (14.5% to 40.5%). In addition, there was a minor increase in the influence of the deans and department chairs (3.2%) and a declining influence of the central administration (29.2%) in approving academic programmes. Between 2007 and 2013, top management leaders and boards retained their influence in selecting new administrators. The academics appeared to have made inroads in this area from 4.5 per cent in 2007 to 36.2 percent in 2013.

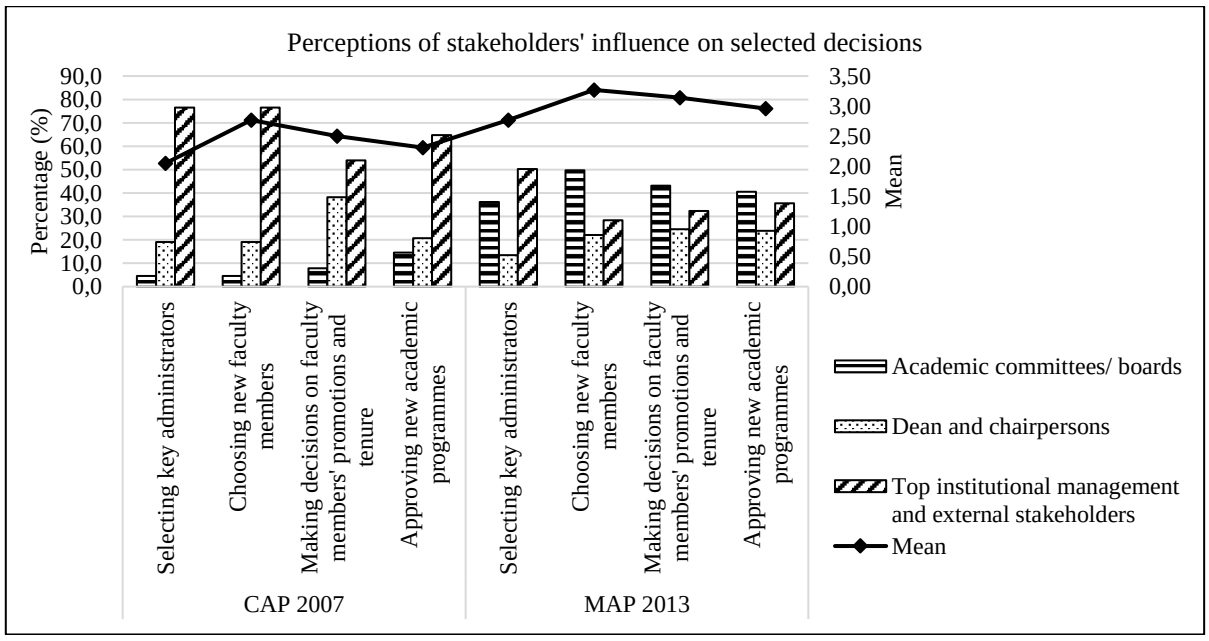

Figure 1. Perceptions of stakeholders' influence on selected decisions (percentage and mean, 2007 and 2013)

Perceptions of Individual Influence

How influential do the Malaysian academics individually consider themselves in decision-making at the level of their department/centre, at the level of faculty/school and at the level of their institution as a whole? The data in Figure 2 shows that the academics did not consider themselves 'very influential' at each of the three levels. In particular, academics in 2007 and 2013 did not consider themselves very influential beyond their department level. In 2007, 42.8 per cent reported themselves influential at the department level, and by 2013, there was a small increase of 2.4 per cent of respondents who reported being influential at their own departments. Similarly, a small minority reported themselves influential at the faculty or school level although the proportion increased from 27.2 per cent in 2007 to 36.9 per cent in 2013. In 2007, just over one-tenth (10.4%) self-reported themselves as very influential at the institutional level and by 2013, that had risen slightly to a quarter (25.1%), a modest increase of 14.7 per cent.

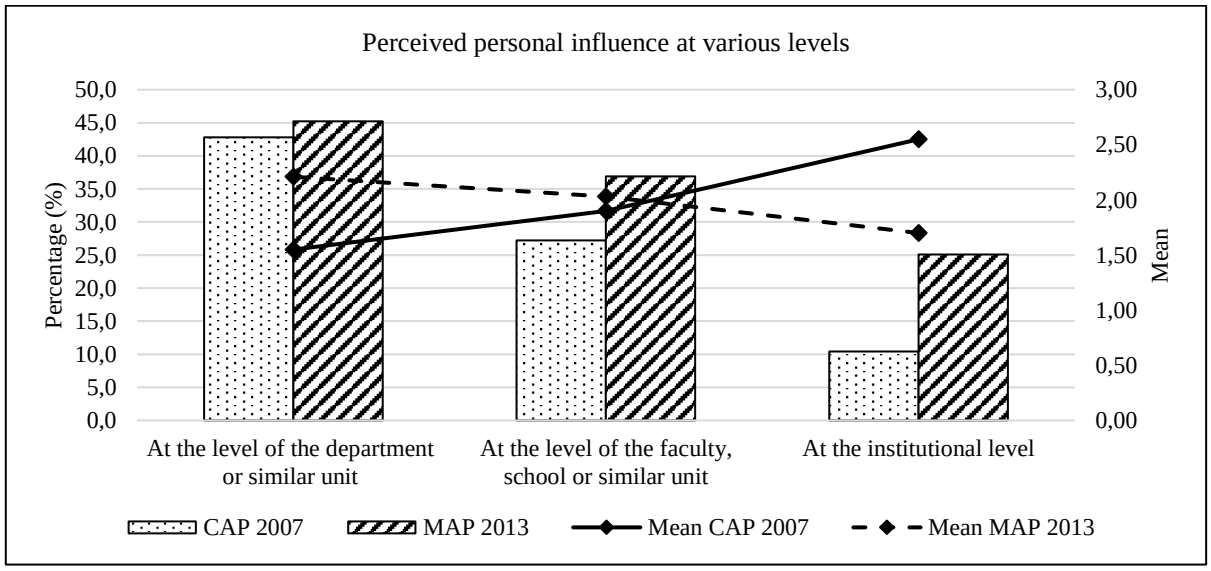

Figure 2. Perceived personal influence at various levels (percentage and mean, 2007 and 2013)

Influence in Evaluation of Key Roles

The respondents were asked to rate the relative influence of stakeholders in three decision areas including Teaching, Research and External activities. Specifically, the respondents were asked to determine who monitored or evaluated their main activities. For the purpose of simplicity, the analysis is focused on six stakeholder groups: academics (peers within the department and other departments), middle management (head of department/school), senior administrative staff, students, external reviewers, and self (see Figure 3).

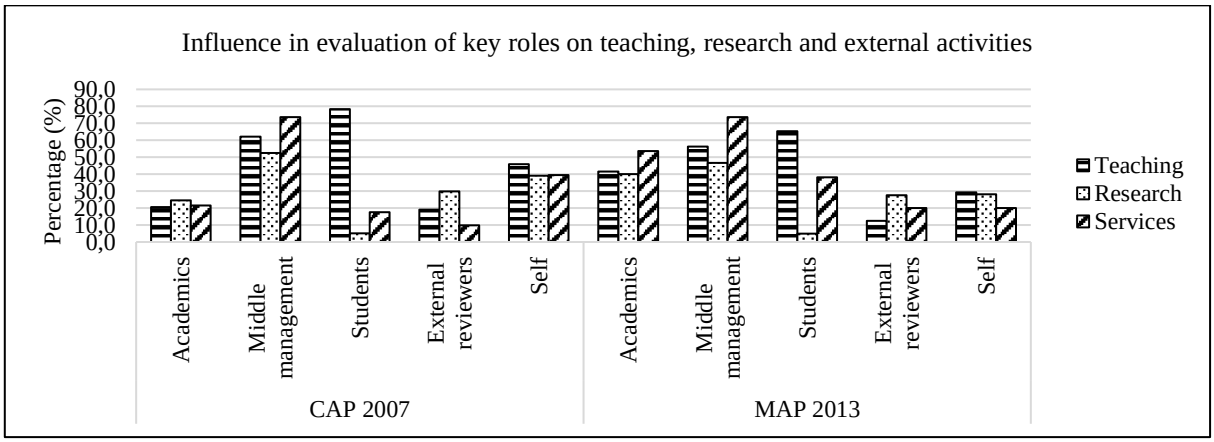

Figure 3. Influence in evaluation of key roles on teaching, research, and external activities (percentage and mean, 2007 and 2013)

Some conclusions can be made from the data on perceived power behind the undertaking of evaluation on academic activities**.** Most decisions seemed to be still vested with the heads of departments or units. The same trend is apparent for both the 2007 and 2013 data. Teaching was evaluated largely by the students (78.3% in 2007 and 65.3% in 2013) and the heads of units (62.2% in 2007, 60.7% in 2013). During the five-year period, there seemed to have been a declining influence on self-evaluation in teaching activities (45.9 % to 29.2%). Although peer evaluation (peers in the same unit or other departments) continued to retain a strong role in evaluating all the academic activities, the head of department continued to retain the highest share of influence in the evaluation of academic activities. This means that since 2007, middle management still dominated the monitoring of the teaching, research, and external activities of the academics.

Perceptions of Leadership Competencies

The academics were asked to assess the prevailing management style in their respective institutions on various aspects. Several items required respondents to record their level of agreement or disagreement with statements about competence in administrative leadership. The first group of competencies can be summarized as communication style of management and the second is operationally-oriented management.

Communication style

Four items in Figure 4 represent the dimensions of communication styles as typical of communication-oriented management. The decision-making in these items may require wide-ranging discussion between stakeholders and have a collegial character. On the other hand, other decision-making processes may tend to be top-down. The respondents registered their level of agreement with the four statements on the four dimensions of communication.

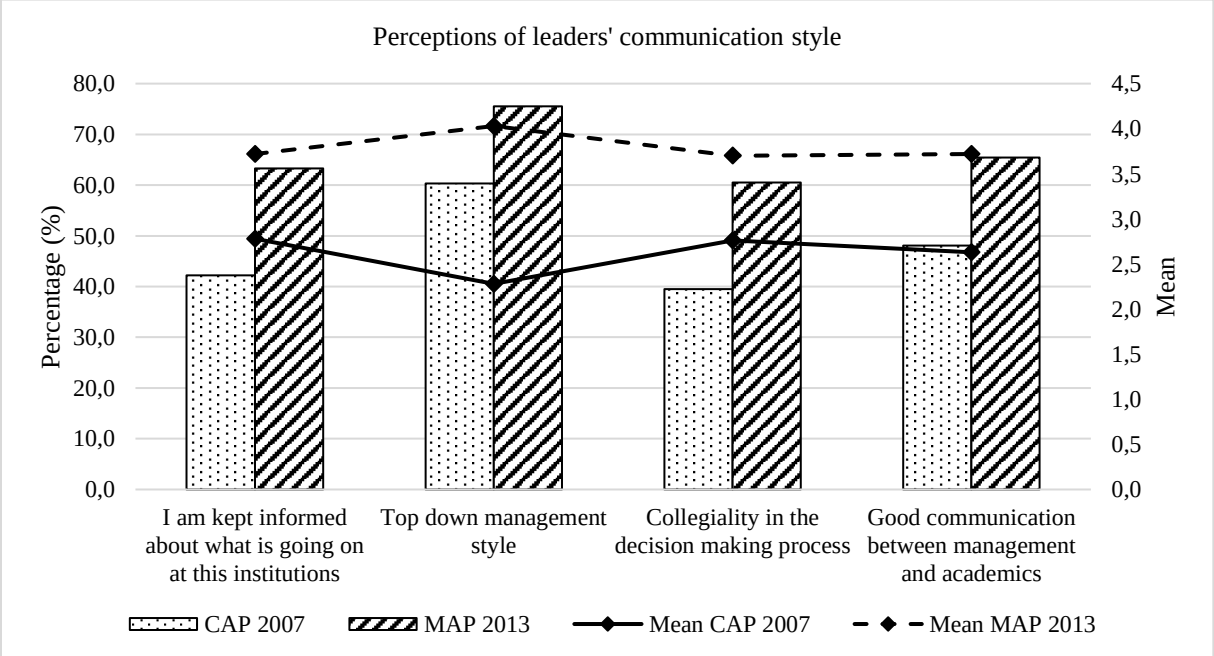

Figure 4. Perceptions of leaders' communication style (percentages of agree and totally agree for 2007 and 2013)

As Figure 4 shows, the quality of communication was perceived to have improved, judging by the 17.3 per cent increase between 2007 and 2013 in the percentage of faculty agreeing that good communication existed between management and the academics. Likewise, increases are evident in percentages of faculty agreeing on collegiality in the decision-making process (21%) and that community was kept informed of what was happening (21.1%) between 2007 and 2013. Nevertheless, a higher percentage of agreement is recorded for top-down management style in 2013 (75.5%) as compared to 2007 (60.3%). This 15.2 percent increase in agreement about the top-down style of management indicates that while academics were more positive about communication style in 2013 compared to in 2007, top-down

management was still considered highly exercised in their system. This means that a healthier communicative management style co-existed with a stronger top-down management style in 2013.

Operationally-oriented style

Distinctive from the communication aspects of management, the second group of competencies is summarized as an operationally-oriented style of management. These items specifically look at aspects of strategic management, competence, and efficiency. The five items are displayed in Figure 5.

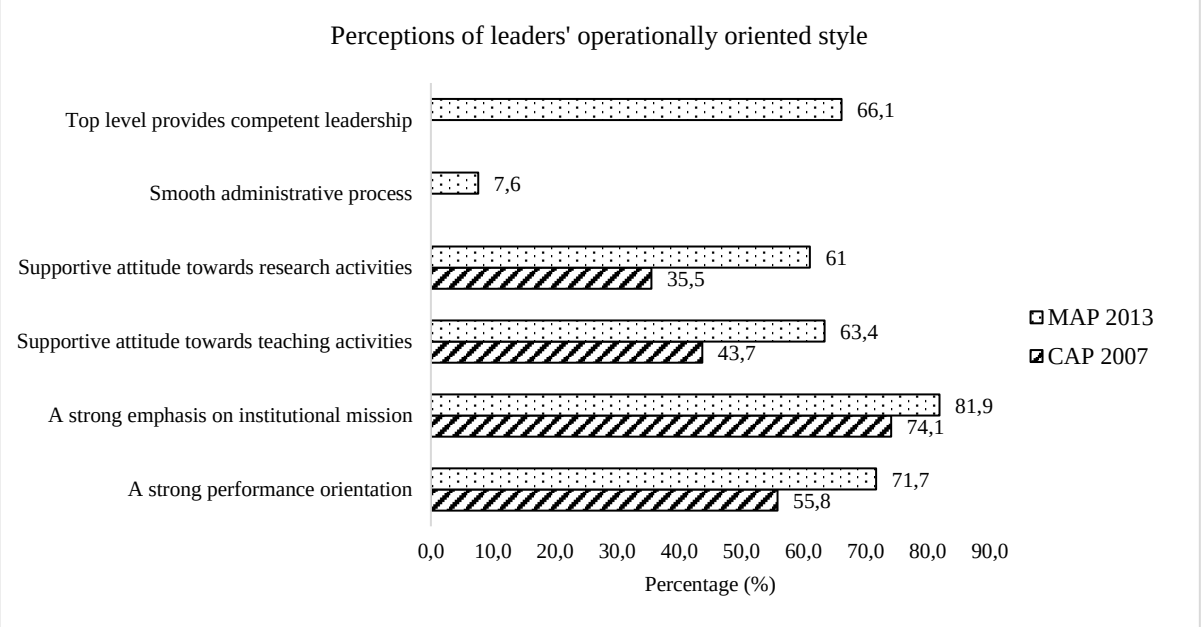

Figure 5. Perceptions of leaders' operationally-oriented style (percentages of strongly agree and agree for 2007 and 2013)

Generally, the data shows that with the exception of the item on smooth administrative process, the trend is clearly in the direction of improvement. A strong emphasis is evident on a strong performance orientation as 15.2 percent more of the respondents in 2013 (71%) rated their management leaders as placing a strong emphasis on institutional mission compared to the percentage in 2007 (56.5%). In 2007, 74.7 per cent of the respondents reported that their institutional mission was strongly emphasized, and by 2013, that had risen to 81.9 per cent. Higher ratings were also given to strong teaching performance (63.4%) and research performance orientations (61%) in 2013 than in 2007 (43.8%, 36.3%) respectively. These suggest that the academic communities in the 2013 MAP survey perceived greater institutional efforts in the attainment of performance than in the 2007 CAP survey. Competent leadership at the Malaysian HEIs was also perceived to be more prevalent as the respondents reported agreement of 66.1% in 2013, higher by 17 per cent compared to 49.1 per cent in 2007. Smooth administrative process received lower agreement in 2013 (7.6% rated agree and totally agree) than in 2007 (19.2 %). This implies that the administration had become less smooth (or more bureaucratic) over the five years.

Discussion

The Malaysian academics seemed to perceive a much more decentralized decision-making process in 2013 as compared to the detected stronger degree of centralization in 2007. Some evidence suggests that although the governance of the Malaysian HEIs was perceived to have become more decentralized, the academics still perceived of themselves as less influential and less prominent in decision-making processes. The main conclusions on the trends in the perceptions of the Malaysian academics on decision-making between 2007 and 2013 are summarized below.

First, between 2007 and 2013, the academics had clearly consolidated their hold over personnel decisions. It is important to note that while faculty influence on academic appointment and promotion had increased in 2013, the vote (for new posts) and the final decision on academic selection and

appointment in the public HEIs were still carried out at the top management level under the guidelines of the Public Service Department. This is similar to the administrators' appointment: most HEIs use the nomination process in choosing the administrators but the power of *appointment* is still the *prerogative* of the top management leaders. Arguably, the data probably reflects the academics' role in carrying out the initial stage or pre-selection for appointment and promotion.

The above interpretive caveat triangulates the findings on academic influence that tends to be located in the department while declining at the school/faculty decision level, even more markedly so at the institutional level. In addition, the consolidation of academics' influence in the three areas of personnel decisions has weak points in the context of a developing country like Malaysia as inbreeding may become rampant especially when no external reviewer or university-wide strategic talent management centre is available to counter and monitor the internal influences on academic recruitment and promotion. Failure to conform to academic norms of ethics and meritocratic values can lead to unqualified academics being appointed and promoted (Altbach, 2010; Azman et al., 2016).

Nevertheless, in the area of selection of administrators, top management and boards still retain the primary influence during this period. The top management and board's increasing influence in approving academic programmes suggests that the key role of approving soft and hard resources (including budgets) in the development of new programmes remains at the board and executive level as advocated in the University Transformation Programme (UniTP) - Green Playbook: Enhancing University Board Governance and Effectiveness (MoHE, 2015b). The Green playbook highlighted that the Board's fundamental roles and responsibilities include overseeing HEI finances, while the roles of the top management leaders (VC and DVCs) are to translate budget strategies set by the Board into guidelines for departments/faculties to follow (MoHE, 2015b).

Second, comparing data from 2007 and 2013, the pattern of perceived influence is still quite modest at all levels. In fact, the level of influence is perceived to decline at higher levels of the organizational hierarchy with most academics still seeing themselves as having small influence at the institutional level. Thus, despite a small rise between 2007 and 2013, the academics' perception is that they do not have much influence at the school/faculty and institutional levels. This suggests that although there seems to be a slightly greater empowerment and collegiality in the involvement and influence of academics at all levels since 2007, the mid and the top management still possess stronger executive decision-making powers. Thus, although the governance of Malaysian universities is more decentralized, Malaysian academics are less influential and prominent compared to academics in Japan, Germany, Canada, and the US (Finkelstein, Ju, & Cummings, 2011; Teichler, Arimoto, & Cummings, 2013) who seem to perform a more significant role in navigating their own institutions.

Third, with regard to the evaluation of academic activities, the same trend is apparent for the 2007 and 2013 data as most decisions are still vested in the heads of departments or units. During the five-year period, although peer evaluation (peers in the same unit or other departments) continues to retain a strong role in evaluating all the academic activities, the head of department/dean continues to exert the highest share of influence in the evaluation of academic activities. While the influence of academics in decision-making as collective bodies in matters involving primary academic activities (teaching, research, and service) increased in the 2013 survey, it is obvious that the middle management leaders have gained more influence in the evaluation of academic activities.

The fact that the Malaysian academics' influence has been taken over mostly by the middle management leaders and not by the top central administration highlights the rise of middle management in the Malaysian higher education system. The trend of 'one-headed leadership' position in the department or school is in line with management orientation in which the head of department's/dean's power has increased (Fitzgerald, 2009; Kekale, 2003; Kwiek, 2015). In this kind of hierarchy, the power to support, modify or dismiss ideas or decisions is often vested in a single person, and in the context of Malaysian HEIs, parochial priorities and self-interests have the tendency to skew decisions. The master and commander syndrome has been reported to be evident in the system, as the academics' role in decision making has become inconsequential despite there being existing academic committees. It has been pointed out that

the content and rationale for decision-making is often poor and that there has been less consultation (Azman, 2019; Mohd Yusoff, Syed Hassan, Che Omar, & Ahmad, 2020). The academics further claimed that the head of departments and deans should be leaders who put faculty interests above their own, thus leading the way to cultivating a healthy academic culture in which people feel a sense of belonging, of respected and that their contribution is valued (Mohd Yusoff et al., 2020). Generally, the Malaysian academics do not accept reasoning and decision-making based on personal views, much less the blatant domination of middle management leaders.

Fourth, the quality of communication seemed to have improved since 2007. The academics appeared to be more satisfied with the competence of top management leaders than before. However, the academics believed that decision-making was still inappropriately top-down. Usually, a top-down management style tends to discourage upward communication and instead emphasizes vertical communication. In the Malaysian HEIs, a communicative management style seems to co-exist with top management style despite the fact that these are often considered to be incompatible. This finding reflects the Malaysian culture which can be described as patriarchal, in which high power distance and group orientation are still customary and practised. In this culture, important decisions, often strategic in nature, tend to make verbally, out of formal meetings, and then circulated among the employees. On some occasions, employees may be persuaded to provide ideas and suggestions, but they are less likely to be granted the authority to make the final decisions. In short, decision-making is centralized, and the ultimate decision lies in the hands of the leaders in formally appointed positions.

Finally, the study found that a much stronger emphasis on institutional mission and performance orientation was perceived in 2013 than in 2007. In addition, higher ratings were also given to stronger teaching and research performance orientation in 2013 than in 2007. While the Malaysian academics reported more positively regarding competent leadership, they considered the administrative process to have become less smooth, i.e., more bureaucratic over the five years. This is not unexpected as critics over the last few years have been complaining that HEIs' bureaucracies have become too bloated (Greene, Kisida, & Mills, 2012; Wan Abdul Manan, 2008) mainly due to the establishment of new administrative roles, administrative concentration (i.e., size of university administration), and competing roles between academic and administrative staff.

Implications and Conclusion

Taken as a whole, the study detected some indications of the managerialist rhetoric in the governance of universities as mid-level managers seem to occupy a more pivotal role in much of the decision-making between 2007 and 2013. Through holding responsibility for evaluating teaching, research, service, and curriculum areas, they have come to play a key role in implementing and influencing decision-making and policy (Briggs, 2001). The nature of their role means that the mid-level management leaders need to have considerable 'local' knowledge (on higher education and management), autonomy, professionalism, and collegiality, as well as good understanding of the quality and nature of academic activities. In fact, the ecosystem (the culture and structures) that supports middle management leaders' in performing their roles is considered critical to the effectiveness of the institution, since they are the role-holders who, make decisions on a daily basis in order to sustain the business of the HEIs (Briggs, 2001; Fitzgerald, 2009; Floyd, 2016). Thus, the Malaysian HEIs should ensure that their academic managers have proven capacity, genuine interest in and commitment to developing fully functioning academics and departments/schools. It is also important to appoint a middle management leader who is regarded as a respected academic leader, who has a highly credible research reputation and sound understanding of teaching-learning practices.

Ideally, a shared governance process must respect institutional values, social norms, and academic traditions. In addition, clarity of individual roles and transparency in the decision-making process are also obligatory (Birnbaum, 2004; Kater, 2017). Thus, a core question for the HEI top management leaders who choose and appoint the mid-management leaders is whether their appointed middle management cadre understands the concept of shared governance and networks within their organization, and whether they could enable institutional changes to occur in a less confrontational and vague manner. In this regard, the middle management leaders should be seen as collegial leaders,

responsible for promoting a culture of consensus rather than promoting greater institutional isomorphism (managerialist control). Further, it is perhaps an appropriate time to question whether those involved in shared governance, particularly the academics themselves, have the expertise, discipline, authority, and accountability necessary to cope with decision-making processes. As expected, the less these individuals understand about the external (and sometimes internal) environment in which they are operating, the less rational or appropriate their decision making will be. This may leave the institutions more vulnerable to making unreasonable changes and eventually erode the autonomy and credibility of the academy. In other words, academics and administrators might have better control in decision-making if they understood more completely their environment, including the higher education mission, priorities, and roles.

Since the top and mid-level management leaders control the amount and type of participation by academics in governance allowed at their institutions, they must recognize that although they agree with academic participation in theory, they must create opportunities for the academics to have access to relevant information and to participate in decision-making processes. Academics, on the other hand, must not only insist on their rights to participate in decision-making but also be willing to invest the time and effort that a participatory role demands. HEIs must also accept their responsibility for promoting academic involvement in governance by providing professional development programmes that prepare future academic members for decision-making roles (Floyd, 2016). Each HEI and the Malaysian Higher Education Leadership Academy (AKEPT) must provide professional development opportunities for top and middle management leaders not only with management skills but also skills that facilitate avenues for participation and communication.

Perceptions of stronger performance orientation, top-down management style and cumbersome bureaucracy during the five years reflect that the market-coordinated system is rather high in the Malaysian higher education system. In addition, the wider societal culture, an autocratic, paternalistic, and top-down rigid leadership structure, may also play a part in how shared governance has been incorporated in HEIs. These structures most often lead to the hierarchical/authoritarian leadership styles that keep decision-making in the hands of a few and therefore beyond the reach of the academics. Although Tierney (2008) and Tierney and Minor (2004) concluded that shared governance is bounded by organizational culture, the findings from the Malaysian surveys may suggest that shared governance is not only bound to the culture of the HEIs, but also to, and by, the culture of the wider society. In fact, the current results confirm that the devolution of governance is different from the models that prevail in developed higher education systems. The differences in faculty participation observed in the Malaysian HEIs compared to the HEIs in the west, are systemic in nature and can be attributed to the HEIs' external political and legal environment (Sirat, 2010).

It is important to bear in mind that the interpretation of the results has focused only on what was available from the CAP and MAP datasets and were from self-reported information. There are issues with regard to self-reported data, especially in the context of organizational behaviour (which is the case here), one of which is that self-reporting may result in response bias. Given the possibility of the respondents over- or under-reporting their influence in decision-making activities, the larger the sample size, the less likely it would be for response bias to be an issue, unless everyone over- or under-reports their activities. The re-running of the CAP and MAP survey (known as APIKS) for the third time in 2019-2020 will allow for more recent insights into changes occurring in HEI governance. Comparison of data in 2007, 2013 and 2020 will also capture more specific and longitudinal trends in the evolution and devolution of institutional governance in the Malaysian higher education system.

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Quality of Work Life, Work Life Balance and Career Satisfaction: Faculty Perceptions in Pakistan

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Abstract

Maintaining the quality of work-life (QWL) is a global challenge faced by higher education institutions, and the same is true for the universities of Pakistan. Unless appropriately managed, the negative feelings about QWL may adversely impact on attraction, performance, and retention of the faculty in any university. The purpose of this research was to gather the perceptions of faculty to explore the interrelationship of QWL attributes, work-life balance (WLB), and career satisfaction (CS). For this survey, a correlational research design was opted to gather perceptions of the faculty teaching in the universities of Lahore. The researcher used the cluster sampling technique to get a target sample comprising 300 faculty members. The sample was drawn from six (3 public and 3 private) universities of Lahore, Pakistan. Descriptive and inferential statistics were applied for the analysis and interpretation of data. Pearson Product Moment Correlation confirmed the association between the variables; regression analysis identified the predictive value of QWL attributes and WLB for career satisfaction. The study concluded that the achieved status of work-life balance strongly predicts career satisfaction. However, perceptions of inequality regarding faculty promotions, workload distribution, and allocated work hours affected QWL negatively. Faculty also disagreed that their employers provide adequate facilities and flexible working hours to manage work-life balance (WLB). The findings and results will assist leadership and faculty in implementing quality work-life programs to improve the retention of current employees and attract quality employees in the future.

Keywords: Higher education, job satisfaction, quality of work life, university faculty, work life balance

Introduction

Continuous efforts to develop human capital (Argyris, 1973) and human social capital (Putnam, 1993) have led to the integrated concept of QWL. Herzberg's (1987) two-factor theory (motivation-hygiene) of job satisfaction provides a rationale to identify why employees may be more productive, creative, and committed to their employer. Previous research has noted when faculty works in a flexible work environment, the perceptions about QWL and job satisfaction are significantly enhanced (Arif, Ejaz, & Yousaf, 2017; Arif & Ilyas, 2013; Hameed, Ahmed-Baig, & Cacheiro-González, 2018).

The term QWL refers to the favourableness and positivity of the workplace environment provided to the people on the job (Afroz, 2017; Arif & Ilyas, 2013; Jaiswal, 2014). In general, QWL attributes relate to the individual perceptions of a person's job and working environment, such as reward and professional development opportunities (Sirgy, Efraty, Siegel, & Lee, 2001; Lee, Back, & Chan, 2015). According to Rethinam and Ismail (2008), QWL is an improved sense of employees' wellbeing. Previous research asserts that QWL covers a vast range of variables, including the needs of employees, a better and pleasant work environment, and the achievement of organizational goals; thus, QWL is conceptualized as a multi-dimensional and dynamic construct varying according to situational demands (Mudrak, 2018; Sirgy, Reilly, Wu, & Efraty, 2008).

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Work-life balances (WLB) and QWL, are rapidly becoming the primary goal for most people, especially generation X and Y (Cogin, 2012; Twenge, 2010). Thus, meeting the future generation's needs is posing a challenge to most employers, and universities are not an exception. Sundaray and Sahoo (2013) argue that if organizations want to attract and retain the most competent employees, they must apply the quality of work-life philosophy to satisfy their employees. It is vital to procure better performance and job satisfaction and better job and organizational commitment (Zare, Haghgooyan, & Karimi, 2014). Many leading organizations like Google, Microsoft, and Amazon believe that QWL programs can enhance employee confidence and organizational effectiveness (Pandey & Jha, 2014; Shue & Falahat, 2017).

Efforts for QWL may prove advantageous to both the faculty and the management of universities (Anderson, Morgan, & Wilson, 2002; Zare et al., 2014) because these efforts intend to remove the source of undesirable behaviours by replacing them with better and modified working conditions and management attitudes (Islam, 2012). Previous research has confirmed that one of the most critical attributes of QWL, job satisfaction, is closely related to customer satisfaction; that is, an increase in one may cause an increase in the other (Hameed et al., 2018; Tschopp et al., 2014). Not only do employees express satisfaction and loyalty, but the turnover intentions are also reduced as well (Rahman, 2015).

Researchers have proclaimed that faculty satisfied with QWL proves to be more creative and efficient (Janes & Wisnom, 2010; Singh & Singh, 2015). Moreover, positive perceptions of QWL and work-life balance led to faculty's commitment and engagement (Arif & Alharbi, 2018). Therefore, many universities in the developed world are working on QWL programs for their workers' holistic wellbeing and care (Alqarni, 2016; Chaturvedi & Saxena, 2017; Ching & Seok, 2018; Jabeen, Friesen, & Ghoudi, 2018). Presently, much research is being conducted to analyse the relationship of QWL with desirable organizational outcomes in universities worldwide.

Srivastava and Kanpur (2014) identified the relationship between employee performance and QWL at Esfahan University. Pandey and Jha (2014) have asserted that faculty performance was causally related to ample and fair rewards, a safe and healthy workplace, improved human capacities, and social work-life. Steenkamp (2002) has identified that poor working conditions, such as high noise levels, poorly designed workplaces, and extended working hours, can negatively affect employees at work and home. Similarly, previous research-informed that most faculty members spend 90% of their time indoors, in offices and classrooms, where indoor air quality is detrimental to their health (). In the case of Pakistan, little effort is expended in this respect; therefore, this need must be studied in the Pakistani context.

Attributes of QWL

According to researchers (Jones, George, & Hill, 2000; Mukhtar, 2012), job satisfaction is a mind-set and employee's beliefs about his current job and university faculty in this case. Mamiseishvili and Rosser (2011) have reported that job satisfaction directly influences the work-related outcomes of the university faculty. Job satisfaction is related to the satisfaction of higher-order needs (respect and recognition), as well as lower-order (job security and salary) needs of faculty (Chitakornkijsil, 2009, p. 215). Therefore, Job satisfaction is identified as a critical component must for any measure of QWL (Cohen, Kinnevy, & Dichter, 2007). The job satisfaction of the faculty is vital in boosting any nation's economic potential as the faculty plays a vital role in the development of social capital by providing better learning opportunities, and creating skilful workforce for the society (Allameh, Hosseini, Mahabadi, & Samadi, 2018; Carr et al., 2017; Hasan, Chowdhury, & Alam, 2008).

Faculty have expressed their diverse needs, such as reimbursement and health job security that the organization needs to satisfy to keep the individual satisfied and motivated (Lee et al., 2015). Regarding QWL of university faculty, the researchers have mentioned the distinguishing attributes of the knowledge workers of the 21st century; they do not wish to indulge in boring routines; instead, they want creative involvement in work to step up in their careers (Cogin, 2012; Rose & Naresh, 2006).

University faculty demands autonomy at work and search for meaningful and purposeful work (Afroz, 2017; Aguenza & Som, 2018; Shue & Falahat, 2017). Many faculty members will fully seek work which requires exercising one's abilities and potential; they show commitment to challenging tasks

needing personal initiative, seeking personal direction, boosting self-esteem, and taking personal credit for what they had achieved through hard efforts (Aguenza & Som, 2018; Alfonso, Zenasni, Hodzic, & Ripoll, 2016; Alqarni, 2016; Ismail & Razak, 2016). Researchers have identified that the issues related to meaningful and satisfying work are limiting job satisfaction; hence such factors need inclusion in the QWL scale (Afroz, 2017; Arif & Ilyas, 2013; Arif & Farooqi, 2014; Singh & Singh, 2015).

Researchers (Antonio, Gutierrez de Blume, & Geor, 2018; Bravo Seibert, Kraimer, Wayne & Robert, 2017; Carr et al., 2017) indicated that university faculty have much to complain about control at work, work autonomy or academic freedom to make decisions; demands at work are ever-increasing while job autonomy and organizational support keep declining (Barnett & Bradley, 2007; Szelényi & Denson, 2019). Faculty also need the freedom to spend time on personal research as research is the most critical agenda for their career development and satisfaction. The faculty are reported to express higher levels of satisfaction when cultural wellbeing is felt (Haar & Brougham, 2011). Moreover, the faculty do not cherish time binds, and absence of flexible work environment (Lamolla & Ramos, 2020; Marra, 2020). A balanced life is the one where energy and efforts are spread over key areas of importance; hence, QWL is linked to WLB. In a changing knowledge economy, management of individual employees and their diverse needs has become a real challenge (Allameh et al., 2018). Work-life imbalance and increasing stress of research and productivity are making higher education teaching jobs difficult (Arif & Farooqi, 2014), disturbing both the personal and work lives of faculty.

Another significant dimension of QWL is work and family life, critically affecting the relationship between the individual and the organization (Arif & Ilyas, 2013). The latest wireless technology in the workplace has removed the borders and boundaries of organizations and created virtual workplaces that allow users to work anywhere without being limited by the physical work environment (Bravo et al., 2017; Kreiner, Hollensbe, & Sheep, 2009), thus linking long working hours with a family breakdown (Almuftah & Lafi, 2011; Antonio et al., 2018).

The spillover between work and family leaves a critical impact on QWL perceptions (Tabassum, 2012). Professional and personal conflicts lead to harmful effects on the health and wellbeing of faculty, reducing their organizational commitment and performance, decreasing job satisfaction, and increasing burnout, ultimately leading to poor quality of life at work (Rithenam et al., 2008).

Perceived organizational support is understood as the employees' global beliefs about care and concern extended to him at the workplace, the appreciation he/she gets for work, and the overall value demonstrated for the wellbeing and welfare of the employee (Eder & Eisenberger, 2008). Perceived organizational support corresponds to faculty's perceptions of what he or she is getting from the university in terms of favouring his/her chosen actions; thus, it signifies the relationship of an employee with the management and leadership of institution he/she works for (Barnett & Bradley, 2007; Haar & Brougham, 2013).

Statement of the Problem

The massification and commercialization of higher education have simultaneously affected the personal and professional lives of employees. The study aims to provide an overview of QWL as perceived by the faculty of Pakistan's faculty of public and private universities. The study also explores the relationship between QWL factors that affect WLB and career satisfaction consequently.

Research Questions

This study was conducted to seek the answers to the following questions.

1. What is the relationship between perceptions of WLB and career satisfaction?
2. Which factors lead to negative perceptions of QWL?
3. What measures could be taken to enhance perceptions of QWL?

The Conceptual Framework

The framework of the current research was adapted from Arif and Ilyas (2013). They had focused on the quality of work-life in private universities in Lahore, Pakistan. They explored different dimensions

of quality of work-life, which have a substantial effect on the life and intellectual stance of teachers. Work environment, work-life balance, the value of work, and satisfaction with interpersonal and social relationships were significant factors in that research. This study has perceptions of inequality and perceived organizational support as a new dimension to enhance the scope of research. The framework explains the relationship between different factors in Figure 1 below. It is assumed that all factors attributing to QWL lead to a satiated state of work-life balance, which in turn translates to career satisfaction.

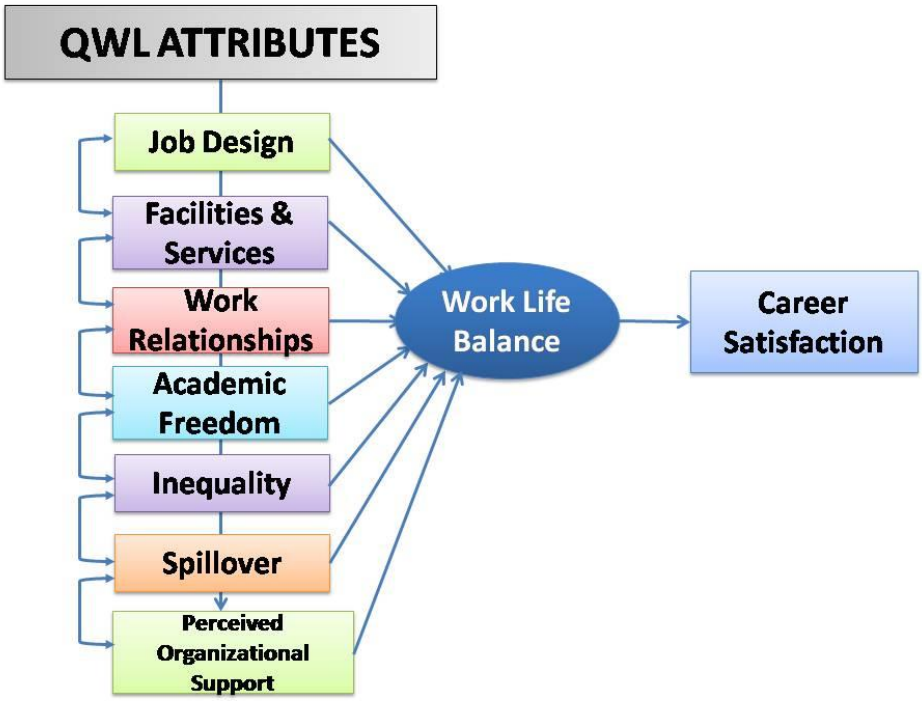

Figure 1. Conceptual model of the research

Methodology

The survey method allows a quantitative explanation of the background of QWL in the context of higher education (Sultan & Wong, 2010). Descriptive research is the most common method used in social sciences for data collection from a sample of a population at a specific time (Amin & Isa, 2008). The population of the study was the faculty of public and private universities in Pakistan. The aim was reduced costs, rapid collection of data, and getting accurate results (Williams, 2011). Cluster sampling was used for identifying target sample because the population (university faculty) was widely dispersed within a geographical boundary (university), making simple random or systematic sampling possible (Johnson & Christensen, 2008; Myers, 2011). The universities were selected conveniently, and the permanent faculty teaching in the university were given the option to become the part of the study if they were willing.

The instrument used to collect data was an improved version of the tool used by Arif and Ilyas (2013), comprising 73 items categorized on five-point Likert Type Scale. The quality of work-life dimensions used in the tool of Arif and Ilyas (2013) were: job satisfaction, the general wellbeing of employees, stress at work, and control at work, working conditions, spillover, work-life balance, and career satisfaction; items about perceptions of inequality and perceived organizational support were added. Since reliability (0.98) and validity of the questionnaire were predetermined, the pilot was not conducted. However, internal consistency (α), composite reliability (CR) and discriminant validity (AVE) scores were also calculated (Fornell & Larcker, 1981).

The researcher administered questionnaires personally. Seventy-five questionnaires were distributed in each university, making a total of 450; 325 questionnaires were returned. Only 300 questionnaires were selected out of 325 for final analysis because these were the most appropriately and accurately filled.

Results

In this section the findings of the research are described. First, the demography is depicted in Table 1, followed by results of confirmatory analysis of data, providing mean, standard deviation, alpha, and composite reliability (CR) and discriminant validity (AVE) of the research variables in Table 2. Secondly, Pearson Product Moment Correlation is computed to check the relationship between the variables as portrayed in Table 3. Finally, multiple linear regression was applied to find out the factors which contribute to predictability of QWL; the results are described in Table 4.

Table 1. Demographic distribution of data

	f	%	M	Mode	SD
Gender					
Male	171	57	1.4	2.2	.49
Female	129	43			
Position					
Lecturer	158	52	1.8	1	1.0
Assistant Professor	85	28			
Associate Professor	23	8			
Professor	25	8			
HODs	9	3			
Qualification					
Masters	16	6	3.1	3	.55
MPhil	203	67			
PhD	81	27			
Experience					
> 5 years	117	39	1.9	1	.99
6-10 years	115	39			
11-15 years	44	14			
16-20 years	16	5			
< 20 years	8	3			

Factor Analysis

All items included in the questionnaire measuring various aspects of QWL, WLB, and career satisfactions were factorized using common factor analysis. Principal component factoring, followed by a varimax rotation, identified high factor loadings (approximately 0.4 or more) for all items (Costello & Osborne, 2005). The factors fulfilled the minimum identifiability criteria of at least three items per factor (Beavers et al., 2013). Scree plot identified the presence of nine factors explaining 72.02% of the total variance (see Table 2). KMO and Bartlett's sphericity test (KMO =0.712, $\chi^2 = 12752.533$, $p < 0.001$) showed that the items included in the common factors fit well making exploratory factor analysis worthwhile. Internal consistency of each subscale (factor) was measured by using Cronbach's Alpha, which scored more than 0.6 for all factors meeting the minimum cut point (Wang, 2003).

Table 2. Confirmatory Factor Analysis results

No	Factors	Mean	SD	Alpha	CR	AVE
1	Job Satisfaction	25.79	3.19	0.775	0.884	0.606
2	Facilities & Services	28.04	6.51	0.827	0.873	0.590
3	Social Relationships	17.92	3.42	0.666	0.851	0.550
4	Academic Freedom	13.66	9.52	0.761	0.842	0.526
5	Inequality	11.61	3.42	0.743	0.830	0.510
6	Spillover			0.853	0.840	0.513
7	Perceived Org-Sup	17.04	4.15	0.842	0.846	0.520
8	Work-Life Balance	19.15	3.28	0.769	0.850	0.533
9	Career Satisfaction	30.84	4.96	0.660	0.831	0.597

Correlation Analysis

Pearson product moment correlation was calculated to determine association between the factors. Most of the factors were found to be positively and significantly correlated with each other; only perceptions of inequality were found to be negatively correlated with other variables. The details are explained below.

Table 3. The matrix of Pearson Product Moment Analysis

	Factors	JD	FSERV	WRLT	ACF	Inequality	Spillover	POS	WLB	CSF
1	Job Design	1	.388**	.091	.472**	-.259**	.029	.232**	.084	.097
2	Facilities		1	.102	.463**	-.082	-.055	.372**	.071	.120*
3	Relationships			1	.237**	-.030	.379**	.323**	.306**	.417**
4	Academic Freedom				1	-.334**	.171**	.479**	.410**	.282**
5	Inequality					1	.108	-.370**	-.228**	-.111
6	Spillover						1	.220**	.433**	.618**
7	Perceived Org-Support							1	.480**	.248**
8	Work-Life Balance								1	.470**
9	Career Satisfaction									1

Regression Analysis

The results quoted above presented a mixed result; there is only one strong link for career satisfaction with negative spillover ($r = 0.618$, $p < 0.01$); whereas other correlation values are moderate or weak. In order to further manipulate the results, multiple linear regression using step-wise method was applied to identify the significant risk factors associated with career satisfaction.

The predictor variables considered were satisfaction with job design, academic freedom, social relationships, infrastructure and other facilities, and perceptions of inequality, spillover, perceived organizational support and work-life balance. Consequently, six models were generated, which are explained below:

Table 4. Step-wise Regression Analysis on career satisfaction as the dependent variable

	Model	β	t-value	p-value	Tolerance	VIF
1	(Constant)		5.938	.000		
	Spillover	.618	13.561	.000	1.000	1.000
2	(Constant)		3.905	.000		
	Spillover	.510	10.510	.000	.813	1.231
	WLB	.249	5.139	.000	.813	1.231
3	(Constant)		2.048	.041		
	Spillover	.456	9.204	.000	.746	1.341
	WLB	.218	4.534	.000	.789	1.267
	SocRlt	.178	3.789	.000	.832	1.202
4	(Constant)		.788	.431		
	Spillover	.472	9.560	.000	.734	1.363
	WLB	.207	4.337	.000	.783	1.276
	SocRlt	.163	3.488	.001	.821	1.219
	SFSERV	.115	2.667	.008	.972	1.029
5	(Constant)		1.734	.084		
	Spillover	.501	9.973	.000	.696	1.436
	WLB	.170	3.435	.001	.716	1.397
	SocRlt	.161	3.465	.001	.820	1.219
	SFSERV	.110	2.579	.010	.970	1.030
	Inequality	-.113	-2.543	.011	.894	1.119
6	(Constant)		1.842	.066		
	Spillover	.511	10.228	.000	.692	1.445
	WLB	.214	4.110	.000	.635	1.574
	SocRlt	.183	3.911	.000	.791	1.265
	SFSERV	.154	3.366	.001	.829	1.206
	Inequality	-.151	-3.251	.001	.797	1.254
	POS	-.140	-2.519	.012	.563	1.777

Discussion

The causal relationships among the factors of QWL and career satisfaction were examined in order to check the quality of work-life model for university faculty. The results of this research adhere to findings of the previous research that attributes of QWL are closely related to WLB and career satisfaction (Hameed et al., 2018; Rahman, 2015; Singh & Singh, 2015; Tschopp et al., 2014). Positive perceptions of QWL and WLB lead to faculty's commitment and engagement (Arif & Alharbi, 2018) and turnover intentions are reduced (Rahman, 2015).

The results of this study unfold that Pakistani universities are interested in establishment of hygiene factors only; the job design, which include satisfaction with pay, workload, and work conditions do not seem to hinder WLB. Faculty was moderately satisfied with infrastructure, facilities, and social relationships as well. However, perceptions of inequality and spill over negate the presence of motivation; hence, the situation can be best described as of no-dissatisfaction, but not complete satisfaction and motivation as identified by (Arif, Ilyas, & Hameed, 2013; 2017). These perceptions of inequality being negatively associated with WLB are posing a greater risk to perceptions of job and career satisfaction of Pakistani faculty as postulated by (Antonio et al., 2018; Bravo et al., 2017; Carr et al., 2017; Szelényi & Denson, 2019).

Shin and Jung (2014) pointed out that newly founded academic managerialism and market-oriented reforms highlighting the bottom-line agenda uses quantitative performance-based management criterion, which becomes a major source of stress for academia. University teaching has become as demanding and stressful as any other corporate work. It is becoming increasingly difficult to enjoy the traditional prestige associated with the profession. Lacking in perks and benefits, it is no more the choicest jobs for the most competent persons. Would it lead to a dearth of quality faculty, the phenomenon already rampant due to globalization and increased competition in the market?

Cogin (2012) remarked that initiatives taken for quality of life by the human resource department of any institution have a universal appeal. While employees may belong to diverse age groups, Baby Boomers, Generation X, and Generation Y, or they may have a traditional or bureaucratic or modern approach to look at various problems of the organization; therefore, management will have to face challenges creatively to meet the needs of such a diverse group (Arif et al., 2017). Xiao and Cooke (2012) argued that Asian cultures are still traditional in their human resource management practices. Most of such managers and employees understand work-life conflicts as a fact of life and believe that each individual employee has to opt for a personal coping mechanism to deal with such conflicts. Therefore, there is a lack of collective effort by governing bodies to shift to caring policies. Terms like work-life balance and quality of life are pronounced as luxuries rather than basic needs; therefore, the fulfillment of such needs is hardly prioritized in any institution.

Baruch (2006) advises that research on QWL and career satisfaction should enrich interdisciplinary research for a broader vision and scope. Opting for a discursive approach will enhance understanding of multiple dimensions of QWL and career satisfaction (Srivastava & Kanpur, 2014). This research highlights the various issues related to QWL and career satisfaction faced by faculty of public and private universities of Pakistan. Moreover, it also provides the guidelines for higher education leadership and governance for policy reforms and creates new job designs suiting the lifestyle of global workers of the 21st century. The real innovation and change are needed in management and governance styles following the Scandinavian model (Mohan & Suppareakchaisakul, 2014). The management of universities may learn to demonstrate a deep concern for the higher needs of their workers, precious because chosen after much deliberation.

The most challenging situation is encountered in the form of negative spillover precariously hovering at the edge. The advent of technology, excessive use of smartphones, and other communication devices have captured the leisure hours of workers. Since the 'work' for university faculty is not limited to teaching, they must play essential roles in administration and research as well; the family time keeps restricting due to insatiable demands of publications and research supervision. The bi-directional conflict (family to work and work to family spillover) keeps interfering in the life of academics (Arif &

Ilyas, 2013; Sirgy et al., 2008) and has become a cause of major friction where family and work roles become mutually incompatible with each other (Alqarni, 2016). A similar situation is prevailing in the Pakistani context, where there are rigid time binds, and no flexibility in working hours is available (Arif et al., 2017; Lamolla & Ramos, 2020).

Therefore, universities in Pakistan, whether public or private, will have to offer more organizational support to deal with issues such as emergency leaves, time pressures, and staff turnover not only to enhance the performance but provide career satisfaction. The task of the human resource department of any university is to create a competitive ladder path of a successful career for their employees, and the task of management is to provide full organizational support to climb that ladder to the top. The focus of university management should shift from physical aspects of job and compensation to the psychological satisfaction of their employees. The management guru Mintzberg (1983, p. 180) had once stated: "As long as society demands cheap, mass-produced goods and services - a great many jobs will remain petty much as they are now."

Conclusion

The results indicate that perceptions of career satisfaction are strongly associated with WLB, meaning that unless WLB is achieved, career satisfaction will remain low. According to regression results, both family-to-work and work-to-family spillover are the strongest risk factors causing a variance in WLB and career satisfaction perceptions.

The Rho scores indicate that the perceptions of inequality are negatively and significantly associated with WLB, indirectly contributing to the reduction in career satisfaction. It means that the unequal distribution of rewards negatively affects satisfaction with perceived organizational support, job design, and academic freedom and weakens the perceptions of QWL by diminishing the relationship of all these variables with WLB.

The perceptions about QWL of the faculty teaching in the universities located in Lahore are very weak. Unless the universities implement some policies to manage negative spillover and improve work-life balance, faculty career satisfaction will not improve. Universities have been slow to realize the importance of developing a family-friendly work environment and/or publicizing it. It is felt that certain management embargos restrict knowledge managers to transform into knowledge leaders. Until the bureaucratic governance prevails, cutting the wings of researchers to fly high and reach the skies of their dreams, the dream of entrepreneurial universities will not be realized.

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The Emergence of the New Mexican Academic Meritocracy

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Abstract

Immersed in a local and global contextualized higher education expansion process, the Mexican academic profession has undergone a profound reconfiguration during the last decades. Its socio-demographic, training, work, attitudes, and career have all change in a significant way, particularly amongst full-time academics. During this period, policies directed at public higher education have centred on a performance-based funding scheme that has generated a strong stratification amongst institutions, students, and faculty. Created in 1984, the National Researchers System (SNI), the first such policy, was directed at full-time faculty involved in research and served as a seed for future policies. This paper discusses the role of SNI as a cornerstone not only in the reconfiguration of the academic profession, but also in the emergence of an academic meritocracy that sits on top of a pyramid in terms of resources and prestige within the academic profession, many of whose members, particularly those oriented towards teaching and even more so part-time faculty, are excluded from adequate working conditions and recognition. Considering this situation as unsustainable, the proposal is made to move the SNI merit-based logic that now applies to all faculty working at a public higher education institution, into each institution individually, where its mission would play a central role in determining faculty work, career, and rewards. By making academic work and careers root in each of the institutions in which faculty work, the proposal aims at building an inclusive meritocracy much in need at this stage of Mexican higher education.

Keywords: Academic profession, meritocracy, Mexico, public policies

Introduction

During the second half of the 20th century Mexican higher education enrolment expanded substantially, from an elite system to a system for minorities and then to a mass system (Rama, 2009).[1] While the gross enrolment rate was 2.7% in 1960 (Casillas Alvarado & de Garay Sánchez, 1992), by 2019 it had reached 41.6% (SEP, 2020).[2] Amid this growth there have been not only financial challenges, but many others —student body, academic and administrative staff, educational programs, facilities, etc.—, just as Trow (1973) envisioned in reflecting on the transition from an elite to a mass higher education system.

Certainly, the recent evolution of Mexican higher education has been shaped by its expansion process, but the specific ways in which it has developed are intimately tied to its initial state, the nature of the national political system and the economic structure of the country. While higher education initial state determined the profile and training of its professoriate, among other aspects, the political system has

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[1] For Trow (1973) the enrolment rates that identify a higher education system as being elite, mass, or universal are, respectively, up to 5%, up to 50% and 51% and more. Rama (2009), considering the Latin American context, has proposed the elite (0-15%), minorities (16-30%), mass (31-50%), universal (51-85%) and absolute (86-100%) stages.
[2] Given the Mexican population dynamic this percentual change implied going from attending 78,753 undergraduate students, to attending 4,931,200 (including graduate students).

influenced the coordination and governance of the higher education system and its institutions. Lastly, the economic structure of the country has been key in orienting the undergraduate academic programs offered and, at the graduate level, its growth and articulation with scientific research as well as with its social and productive milieu (Ibarra Colado, 2010).

An additional factor that has strongly influenced the contemporary development of Mexican higher education has been the global implementation of neoliberal policies. Intensified world-wide during the 1980s (Escalante Gonzalbo, 2015), neoliberalism promoted a type of globalization where the idea of the U.S. research university became the hegemonic model that any institution of higher education had to imitate if its aspired recognition as a "world class" university (Marginson & Ordorika, 2011; Salmi, 2009). Nevertheless, the efforts to respond to globalization imitating such a model in Mexico, as in many other countries with socioeconomic conditions quite different from the "first world" trying to be emulated, have led many institutions to poorly attend their local realities and surroundings (Balbachevsky, 2016; Cantwell & Maldonado-Maldonado, 2009).

In its development, Mexican higher education has undergone a significant rate of institutional diversification (Teichler, 2009), which in turn has been associated with greater faculty differentiation (Rubio Oca, 2006). Such diversification, however, taking place in the Mexican political, economic, and aspirational context under the framework of neoliberal globalization, has induced an upsurge in institutional and academic stratification in which certain institutions and faculty have settled, in terms of resources and prestige, atop the academic pyramid (Didou Aupetit & Gérard, 2010; Mendoza Rojas, 2018). This condition has also been precipitated by a public funding system of higher education based on performance evaluation and the attainment of indicators that essentially mirror the American research university model promoted by international rankings (Ordorika & Lloyd, 2013).

In this general context the main purpose of this work is twofold. First, to advance the hypothesis that a small segment of Mexican academics has turned into a new aristocratic meritocracy —with characteristics similar to those Markovits (2019), Sandel (2020) and Young (1961) describe for meritocracies in countries with developed economies— and, secondly, to propose an alternative that would safeguard the positive aspects of the experienced "meritocratization" process while minimizing its negative collateral effects.

Under this perspective, this work is organized in three sections and a final reflection and proposal. The first section briefly describes the reconfiguration of the academic profession in Mexico over the last three decades. In the second section the central idea of the text is developed: that a new "aristocratic academic meritocracy" has emerged in recent times. The third section comments some elements of the way in which this new academic meritocracy conceives its work and the rewards it receives from it. Finally, a proposal attempting to retain the achievements of a meritocratic approach to academic work, while reducing its undesirable effects, is made.

The Reconfiguration of the Academic Profession in Mexico

By 1980, in only two decades, Mexican higher education enrolment had grown more than 800% relative to 1960, and faculty positions had increased more than 500% (Casillas Alvarado & de Garay Sánchez, 1992). At the same time, Mexican academics presented, in general terms, a professionally fragile profile. Less than 20% of its faculty had a full-time contract, most did not have any thorough professional experience and had not completed graduate studies, and they were essentially engaged in teaching undergraduate-level classes without adequate preparation for it. Additionally, they carried out little research and their collaboration with international colleagues occurred in very specific fields, where only a small number of academics from a few institutions were involved (Gil Antón, 1996; Gil Antón et al., 1994).

After some important pioneering studies on Mexican faculty (Gil Antón et al., 1992; Kent Serna, 1986a, 1986b), several national surveys were carried out from 1992 thereon: in 1992 (Gil Antón et al., 1994), 2002 (Grediaga Kuri, Rodríguez Jiménez, & Padilla González, 2004), 2007 (Galaz Fontes et al., 2012) and 2018 (Estévez Nenninger et al., 2018). Using the respective databases that will be referenced as

1992, 2002, 2007 and 2018, what follows is a very general description of the evolution of a small set of characteristics of full-time Mexican academics that talk about their reconfiguration during the last four decades.[3]

In relation to age, when compared with the year 1992, faculty in 2018 reported a rise in average age, from 42.0 to 52.5 years (see Table 1). More specifically, the percentage of faculty aged 60+ went up, from 3.8%, in 1992, to 25.7%, in 2018, while faculty under 40 years of age decreased, in the same time period, from 44.1% to 11.2%.

Regarding sex, percentages of full-time female faculty increased between 1992 and 2018, from 30.3% to 43.9% (see Table 1). Even though the last percentage is still far from being a parity figure, percentages of female faculty relative to all academics under 40 years of age in each survey, have consistently risen: 33.0% for 1992, 43.0% for 2002, 45.0% for 2007 and 51.1% for 2018.

Regarding their educational level, the surveyed faculty who reported having a bachelor's degree as their highest degree decreased between 1992 and 2018, from 64.9% to 6.8% (see Table 1). At the same time, faculty who reported having completed a Ph.D. in that same period rose from 9.4% to 56.6%. This difference reflects, on the one hand, that a considerable percentage of academics completed their graduate studies while already working in their respective institutions, in not few cases thanks to federal and institutional programs (Padilla González, 2007), and on the other, the fact that a higher percentage of new personnel is entering institutions with a graduate degree. Thus, over the years the percentage of hired academics who access their first contract with completed Ph.D. studies has increased considerably: 2.2% in 1992, 3.6% in 2002, 12.4% in 2007 and 19.9% in 2018 (see Table 1).

Table 1. Several characteristics regarding the reconfiguration of Mexican full-time faculty, 1992-2018[1]

Characteristic	Year			
	1992[2]	2002[3]	2007[4]	2018[5]
Average age (years)	42.0	45.9	49.9	52.5
Sex (percentage of females of FT faculty)	30.3	36.2	35.7	43.9
Highest degree at the time of the survey				
Bachelors	64.9	41.1	24.8	6.8
Masters	25.8	36.6	41.8	36.6
Doctorate	9.4	22.3	33.5	56.6
Highest degree at first academic contract				
Bachelors	90.1	86.4	62.0	55.7
Masters	7.7	10.1	25.6	24.4
Doctorate	2.2	3.6	12.4	19.9
Family educational background (percentage)				
At least one parent with higher education	32.2	31.5	36.1	47.0
(For Faculty under 40 years)	31.5	34.9	47.9	65.6
Hours per week devoted to:				
Teaching (time in classes)	22.7	12.5	12.5	10.9
Research	-	6.3	10.2	9.7
Academic preference leaning towards:				
Teaching	59.2[6]	-	55.6	40.6
Research	40.8	-	44.4	59.4

[1] All figures were derived directly from the databases of the surveys enlisted below.
[2] Traits of Diversity survey: NT = 3,764; NFT = 1,619 (Gil Antón et al., 1994).
[3] Public Policies survey: NT = 3,861; NFT = 1,775 (Grediaga Kuri, Rodríguez Jiménez, & Padilla González, 2004).
[4] Mexican CAP survey: NT = 1,973; NFT = 1,775 (Galaz Fontes et al., 2012).
[5] Mexican APIKS survey: NT = 4,668; NFT = 3,757 (Estévez-Nenninger et al., 2020). Figures for this survey differ from those in the referenced paper due to the use, in this work, of a weighing procedure developed afterwards.
[6] This figure corresponds to the 1992 Carnegie International Survey of the Academic Profession (Gil Antón, 1996).

[3] The surveys carried out in 1992 and 2002 included in their samples half- and part-time faculty. The 2007 and 2018, on the other hand, only considered full-time personnel, the group considered to be the core of the academic profession to the extent that it included those who could get involved in all tasks usually associated with academic work: teaching, research, service, and institutional participation (Bowen & Schuster, 1986). Pinto, Galaz Fontes and Padilla González (2012) have analysed methodologically the national faculty surveys prior to the 2018 one.

At the same time the above profile changes were taking place, the social origin and current households of academics had also changed in a significant manner. For example, the percentages of academics with at least one parent with higher education studies grew from 32.2% in 1992, to 47.0% in 2018. Also, among faculty under 40 years of age, the corresponding figures for 1992, 2002, 2007 and 2018 were, respectively, 31.5%, 34.9%, 47.9% and 65.6%, reflecting a strong dynamic mobility and socioeconomic replacement (see Table 1). Part of a social reproduction processes of a socio-labour sector (Esteve Palós, 2005; Rodríguez, 2016), the percentage of academics who reported that their partners had higher education studies increased from 70.8% in 2002, to 79.6% in 2007.[4]

In addition to the aforementioned aspects, work dynamics for full-time academics have been modified too during the period 1992 - 2018. While in 1992 the faculty surveyed reported, on average, dedicating 22.7 hours per week to teaching classes, by 2018 that figure decreased to 10.9 hours. At the same time, for the period 2002 - 2018, the hours per week dedicated to research increased, on average, from 6.3 to 9.7 hours (see Table 1).[5]

Associated with the mentioned shift in work priorities, a change in academic preferences has also taken place. Thus, while in 1992 59.2% of full-time academics surveyed by Gil Antón (1996) affirmed that they felt more inclined towards teaching (including a percentage that reported incorporating research activities in a secondary way), in 2018 such percentage had decreased to 40.6%. Reciprocally, the preference for research, either exclusively or combined with some teaching activity, increased from 40.8% in 1992, to 59.4% in 2018 (see Table 1).

We therefore observe that between 1992 and today the profile of full-time Mexican faculty, which in 2016 represented around one quarter of all academics (Mendoza Rojas, 2018), has been reconfigured. They have aged, become more feminine, gone through graduate studies, come increasingly from more educated families, have partners with a higher education level, are more involved in research then in teaching and, correspondingly, report a stronger preference for research than for teaching. All of this in just three decades (see Table 1) and, as will be argued in the next section, under the context of a set of public policies at the core of which has been the National Researchers' System.

The Emergence of the New Mexican Academic Meritocracy

Although briefly, the previous section showed that in the last three decades full-time Mexican academics have reconfigured themselves to mirror the "ideal international" faculty, i.e., highest possible degree (Ph.D.) obtained at a "world-class" university (Salmi, 2009), productive research activities and being member of international academic networks in their fields of study (Didou Aupetit & Gérard, 2010).

Beyond the "natural" processes expected from the expansion of a higher education system in a country with a developing economy like the one Mexico had until the 1970s, the growth that occurred in that decade has been interpreted as the result of a political exchange (or pact) between the State and middle-class sectors of society, in which access to higher education for those middle-sectors—a possibility of upward social mobility— provided legitimacy to the State (Fuentes Molinar, 1986). Such growth, however, supported by a very limited institutional and academic platform and in a particular political context, was disorganized and generated, among other effects, an institutional stratification characterized by highly differentiated quality levels in terms of infrastructure, educational programs, personnel, teaching, research, and service activities (Fuentes Molinar, 1989; Kent Serna, 1993).

Until the early 1980s, higher education institutions developed as "disorganized anarchies" (Ibarra Colado, 2010). At that time Mexico faced a financial crisis that led to a transformation in the relationship between the State and Society. In that context public higher education would be increasingly financed based on the evaluation of its performance (Mendoza Rojas, 2002). In the mist of budget cuts to public higher education and a salary containment that implied, due to inflation, a real-income reduction of more than 60% of faculty salaries (Ordorika Sacristán, 2004), the National Researchers' System was founded

[4] The corresponding question was not included in the 1992 and 2018 surveys.
[5] The 1992 survey did not consider a question regarding the number of hours per week involved in research activities.

(SNI from its initials in Spanish; Poder Ejecutivo Federal, 1994). SNI, originally conceived to alleviate to some extent the sharp income reduction of faculty doing research, was a product of six factors acting together: (i) the expansion of higher education, (ii) the economic crisis arising from the Mexican development model, (iii) a dysfunctional governance of the higher education system, (iv) the neoliberal globalization then in action, (v) a political context characterized by a quid-pro-quo dynamics and, very importantly, (vi) the existence of a group of faculty members with strong research and international disciplinary referents.

Just as the political pact between the State and the middle-classes that took place in the previous decade, the creation of the SNI expressed a new agreement, but now between the State and academic-researchers mainly from the natural and physical sciences, which happened to have close ties to the government (Soberón, 2015). Just like all higher education faculty working at that time, this group also suffered a very significant drop of income by 1982. However, unlike most academics, this group was in a position to directly communicate to the then Secretary of Public Education and through him, to the President of the country, the need and convenience of creating a "system of national researchers" to prevent the possibility of brain drain (Flores Valdez, 2012). Thus, appeared the seeds for financing policies that would later on target the hole of public higher education. Such policies would follow in what is known as the "modernization" stage (Kent Serna, 2009).

Originally addressed to a small group of researchers working in public higher education institutions, the underlying logic of SNI would soon extend, directly and indirectly, to every full-time faculty member in the country (Galaz Fontes & Estévez Nenninger, 2015). It would also touch other aspects of higher education (program accreditation, student admission processes, certification of administrative procedures, etc.) in order to, finally, structure a conditional cash transfer system aimed at faculty (Galaz Fontes & Gil Antón, 2013a) and, at the institutional level, a remuneration scheme based on performance (Mendoza Rojas, 2002).

Basically, the operation of SNI is based on (a) the establishment of criteria consistent with an international academic life (e.g. publication of articles in prestigious journals, citations to published works, obtaining funding for research projects, direction of graduate-level thesis, and others); (b) association of such criteria to a scale of positions or levels; (c) a collegiate evaluation of applicants, the vast majority of whom are full-time, by national committees; (d) a new member were admitted, he/she would be appointed national researcher and be given additional income, not assimilable to its contractual salary, depending on the level achieved, and (e) an evaluation process performed every several years that could result in moving up the ladder, but also in being expelled from the system (CONACYT, 2020).[6] Initially focused on the income dimension of academic work, SNI soon acquired, largely thanks to its operation centred on individual academic "merit," something that had an important symbolic value and developed an enormous capacity to modify the lives of faculty in general, and particularly those with an inclination towards research and/or towards the material and symbolic rewards associated with prestige.

In the first section of this text the global reconfiguration of the Mexican academic profession was briefly documented (Galaz Fontes & Gil Antón, 2009). However, these changes (and others) have not been homogeneous. There are significant variations with respect to their contract (full- versus non-full-time) and institutions in which faculty work, the disciplines they pursue, their gender and, in particular, in relation to whether their main activity is teaching or research. Indeed, it is SNI members those who have changed the most and, within this already select group (currently around 30% of full-time faculty), the subgroup located in the two upper levels of the SNI scale[7] is the one that most fully meets all of the "ideal" international academic criteria recognized by this system. If official statistics reported a total of 394,189 faculty members in 2019 (SEP, 2020), around 2-3% of them, those in SNI levels II and III,

[6] SNI by-rules are more complex and specific, but these are its central characteristics. Also, although not originally, in time the system would accept researchers working in private higher education institutions and in industry.

[7] SNI has five levels associated with different additional income and prestige: Candidate, Levels 1, II, III and Emeritus. By 2016 national researchers II, III and Emeritus represented about 23% of all SNI members (Rodríguez, 2016). Emeritus SNI members are retired national researchers.

constitute what can be called a Mexican academic elite which, because it is based on its work, is labelled here as meritocratic (Markovits, 2019; Sandel, 2020). How did this elite emerge? What consequences has it brought?

SNI, along with other merit-based payment programs, has had a considerable impact inducing faculty towards a Ph.D., to work and produce more in research and to teach at the graduate level (Galaz Fontes, Padilla González, Viloria Hernández, & Villa Chávez, 2014; Rubio Oca, 2006; Urbano Vidales, Aguilar Sahagún, & Rubio Oca, 2006). At the same time, however, several important negative collateral effects have been documented, i.e., promoting simulation, corruption, discouragement of academic participation in institutional governance, dismantling of the institutional academic career and, of utmost importance, it has discouraged teaching in a higher education system that is mainly oriented to professional training at the undergraduate level (Galaz Fontes et al., 2014; Galaz Fontes & Gil Antón, 2013b). On the other hand, given that working conditions vary from institution to institution, SNI has also impacted their stratification in terms of the working conditions that a given institution can provide so their faculty can perform a job that may lead them to be admitted to the system or to stay in it.

As a reflection of the SNI recognition and remuneration scheme, membership in SNI grew, relative to all full-time faculty surveyed, from 8.0% in 1992, to 30.7% in 2018 (13.8% in 2002, and 21.5% in 2007). Associated with this growing emphasis on scientific research work and knowledge production, there is also a difference regarding the time that faculty reported to be involved in different activities, consistent with the SNI reward system. Thus, while in 2007 non-SNI full-time faculty affirmed that they dedicated 23.3 and 7.4 hours per week to teaching and research activities, respectively, SNI academics reported for the same activities 15.2 and 20.3 hours per week.

Associated to the above-mentioned changes, SNI also seems to have a strong impact on its members' academic preferences. While SNI members reported very high levels of preference towards research both in 2007 and 2018 (91.7% and 91.5%, respectively), only 32.8% of non-SNI academics surveyed in 2007 reported leaning towards research (67.8% towards teaching), increasing to 45.0% in 2018 (55.0% towards teaching). This change in academic preference amongst non-SNI scholars indicates the powerful attraction that the research recognized and rewarded by SNI represents.

Another evidence of the impact of SNI in Mexican full-time faculty is the fact that evaluation criteria for researchers in the areas of natural sciences and mathematics is in accordance with their working and production conditions and expected disciplinary trajectories, while the criteria used for social sciences are adaptations of the former. In this way, while criteria for mathematics and natural sciences constitute a kind of a photograph of the way in which its members work, they have served as a model for those in use in the social sciences area, in a process of disciplinary isomorphism (Gil Antón & Contreras Gómez, 2017).

On the other hand, given that SNI has been implemented in the context of a higher education system that has expanded and, at the same time, diversified and stratified, there has also been an unequal distribution of SNI members in different types of higher education institutions. For instance, in 2007 SNI academics were over-represented, when compared to the percentage of faculty working in them, in public research centres (6.7% of the national total of academics and 27.4% of the national total researchers) and in federal public institutions (22.8% of the national total academics and 31.1% of national total researchers). However, they were under-represented in public state institutions (42.0% and 30.9%, respectively), public technological institutions (15.1% and 3.8%, respectively) and elite private institutions (13.4% and 6.8%, respectively). While over-representation at public research centres is consistent with their explicit institutional mission, such is not the case with the over- or under-representation of SNI academics in the other types of higher education institutions.

Finally, regarding the international dimension of the academic body, Didou Aupetit and Gérard (2010) have documented, with 2009 data from SNI, that top-level membership has been associated with completing a Ph.D. in a foreign country or, alternatively, in a prestigious national institution. Along these lines, Galaz Fontes (2010) reports, for 2007, that among faculty who reported being SNI members,

47.0% obtained their highest degree in Mexico, while the remaining 53.0% did so in another country. Also, for that year, Galaz Fontes and colleagues (2012) point out that, while among non SNI faculty 23.9% of those who report doing research also say that they collaborate with international colleagues, the corresponding percentage for SNI members is 63.3%.

Summarizing, in the context of a performance-based public funding scheme for higher education, SNI has had an important impact on all Mexican faculty through a small percentage of those who hold a full-time position (around 8% if we consider all members of the SNI, and 2-3% if we only include levels II, III and Emeritus). SNI has also contributed to the reconfiguration of its a socio-demographic and academic profile; it has modified their work and their perception of it. Likewise, it has encouraged faculty to focus more and more on research activities that lead to products recognized in international circuits of journals and publications and, at the same time, it is push institutions to hire, for their full-time openings, academics that are in the direction of entering the SNI, as that brings more public budget and prestige form them. Thus, a new and contemporary academic meritocracy associated with the upper SNI levels has emerged that was not present three decades ago.

The Perspective of the New Mexican Academic Meritocracy

It has been commented that the political pact between the federal government and research- oriented faculty, reflected in the creation of SNI in 1984, was broadened and deepened in the following decades, and today, thanks to a network of programs consistent with such pact, the logic of the SNI system has been internalized by a vast majority of young people with academic and/or research aspirations as the only model of personal and professional development. For them, their perspective for development is set in climbing the SNI ladder, regardless of the institution in which they work, not paying appropriate attention to the profiles of the students they attend nor the discipline they cultivate. Start as candidate and do what is necessary to get to Level I and then to Level II, then keep going up to Level III and, finally, become an Emeritus National Researcher. Although entering the system is a highly rewarded event, remaining in it, and particularly not being able to do so, can be more than personally traumatic (Camarillo Hinojoza at al., 2020), but these are the costs of the meritocratic dynamic for its followers (Markovits, 2019).

Regardless of the institutional uprooting that it promotes or the exclusion of broad sectors of colleagues and co-workers (Suárez Zozaya & Muñoz García, 2016), it is assumed that progress along the SNI categories implies a contribution to the training of competent and socially responsible professionals and, at the same time, that solutions to national problems are provided by way of their research. However, even though indexed publications of Mexican authors have increased (CONACYT, 2017), national economic development and general well-being of the population seem not to have been very affected by such scholarly production. But neither this nor the documentation of negative collateral effects seem to bother much the adherents of this scheme (Alvarez Mendiola, 2010; Esteinou Madrid, 2013; Galaz Fontes & Gil Antón, 2013b).

The disorderly expansion of higher education contributed to the emergence of quality-differentiated sectors among higher education institutions (Kent Serna, 1993). Similarly, the pact formalized in SNI has generated a stratification of the academic body. While most faculty employees in Mexico do not have job stability or appropriate conditions to carry out their work, and are subject to a non-stop flow of public policies whose objective seems to be the improvement of a "paper university," as Porter (2003) acutely expressed more than 15 years ago, a small percentage of academics is part of the global academic community thanks to their publications in journals and editorials of international quality, always under the hegemonic pattern of U.S. research universities, a scheme that is often divorced from the real needs of the countries that follow this model (Marginson & Ordorika, 2011).

During the last three decades programs such as SNI have been transformed and sophisticated, but they have kept their orientation and reinforced a discourse characterized by the use of terms such as *evaluation*, *accountability*, *quality*, *excellence*, *performance-based funding*, *accreditation*, *competitiveness*, *entrepreneurship*, *labour market*, *globalization*, *internationalization*, *human capital* and, particularly, *merit*. These concepts are systematically used by politicians, education authorities,

institutional officials, faculty, and even students. With them, a new "common sense" (Alcántara, Llomovate, & Romão, 2013), in which the notion of "meritocracy" is central, has taken root around the functions, actors and dynamics of higher education and its relationship with society.

The new meritocratic common sense and its associated practices have brought with its innumerable effects on the conformation, structure, organization and functioning of Mexican higher education. Thus, on the one hand, it gives privilege to training designed for a labour market that does not take into account non-commercialized social needs -as in the case of training of public health professionals- and, on the other hand, it makes civic formation non-existent, solidarity invisible and diminishes the helping capacity of students and faculty in a country that requires complete participation just to follow through. As a case in sample, in scientific research, publishing in international journals is frequently confused with helping generate real solutions to national problems. In other cases, the research being done deals more with the agenda of researchers from universities in the "central" countries rather with the immediate problems in an institution's community. All of this contributes to keeping our scientific and technological development, albeit of quality, still "peripheral" to the extent it depends on the hegemonic academic centres of the world (Arocena & Sutz, 2001).

Public higher education, its central actors and its dynamics have been commercialized in the sense that its operation has tended to incorporate the logic of the market and, in congruence with this, nobody sees it as a public space where rights and the common good should prevail, but as markets where essentially competition and profit recognize individual merit (Slaughter & Leslie, 1997). On the other hand, by accepting that academic normality in Mexican higher education institutions should be the same as that observed in developed countries, they more than willing to compete to improve their standing in university "rankings", setting aside any question that might suggest that having "world-class universities" could be, at the same time, locally dysfunctional (Ordorika Sacristán et al., 2008).

SNI, together with other similar financing schemes, has contributed to generating a "aristocratic academic meritocracy" that, following Markovitz (2019), we could characterize in terms of a high educational qualification (they have completed a Ph.D. in an international institution or in a prestigious national one), they focus on research and are part of the top SNI levels, they participate in international academic networks, they are very hard-working and see individual evaluation as the natural way to properly assign resources and prestige, although they do not necessarily agree with the quantitative instruments currently in use (Buendía Espinosa et al., 2017). This academic elite has endorsed the meritocratic principles and considers that the bonuses and the recognition they receive are fully justified and do not represent any concession from the State (Young, 1961); they assume that just as they now have favourable conditions, anyone can obtain them if they execute hard-enough work. Finally, they consider that their work is essential for the development of higher education and the country.

In short, we have lived under material conditions and practices that have promoted the development of an individualistic "meritocratic common sense" and, to that extent, those of us who participate in public higher education (academics, students, workers, and authorities), have been, for all practical purpose, ideologically colonized (Galaz Fontes & Martínez Stack, 2020; Markovits, 2019). One consequence of this is the assumption that higher education and scientific research are absolutely neutral, and that the only thing that matters is that they keep their quality or excellence. Likewise, there is a tendency to think that, given such neutrality, higher education and scientific research are not, and should not be, closely associated with a national project. With all that is happening today, the real question is whether it makes sense that this ideology and its devices continue to function in the new times that are looming on the horizon, or if it does not.

Final Reflection and Proposal

In the context of the aforementioned, one of the challenges facing Mexican faculty, especially full-time and SNI members -and even more so the new academic aristocracy- is to critically question the meritocratic ideology to which they have been subjected during the last decades and begin to participate in the construction of a new perspective on the concept of merit. What alternatives can be considered

for a less meritocratic-excluding development of the Mexican academic profession in the face of this state of affairs?

Based on the existing literature and on the antecedent reflections, the central proposal of this work is to take the meritocratic ethos and structure of the academic career immersed in SNI, and to transfer it to all higher education institutions where academics work. In other words, it is about building a horizontal meritocratic-inclusive alternative, one that would foster collaboration and solidarity, and would make institutional and individual isomorphism unnecessary. For countries not in the centre of the academic world it is important to build an alternative to their peripheral status in it, and this could be part of it.

The approach has several important implications. First, advancement in an academic career should depend on the faculty members' contributions, both individual and collectively, in support of the mission of the institutions where they work. Secondly, the academic career must expand in such a way that recognition and remuneration may be associated with research activities, but also with teaching and/or extension/outreach activities (Boyer, 1990). Third, additional remuneration based on short-term evaluations must be minimized and, instead, adequate income must be allocated to each of the categories that different work paths may assume. Fourth, it is important that the academic career should not be a sprint, but rather that it should have a temporal/periodical perspective in tune with the nature of the work being done. Finally, the decision-making process regarding faculty admission, promotion and retirement must result from a collegiate process in which academics assume, far from one of submission (Galaz Fontes et al., 2011; Gil Antón, 2000), a central role vis-à-vis the corresponding authorities.

Today we observe the strong presence and influence of an academic meritocracy that is positioned at the top of a stratified academic profession. Faced with this situation, the previous proposal also implies that all academics should make an effort to transform such segmented and stratified profession, into a "unitary" profession whose existence reaches beyond the institutions where they work, a given type of contract, and the main activity they develop. There are interest groups (institutional and government authorities, political groups, unions, think-tanks, etc.) that must be considered and understood because they compete for control, resources and the platform that constitutes higher education (Acosta Silva, 2015; Ordorika & Lloyd, 2014), and all this should be taken into account in a transition project. However, it is essential to recognize that maintaining a pyramid that converges in a sector that oscillates between 2% and 8% of a community of almost 400,000 members (SEP, 2020), is not sustainable.

Rather than making proposals that only take into account SNI members (e.g., Bensusán & Valenti, 2018), it is time to seek, with solidarity, coordination and bearing in mind the diversity that characterizes the Mexican academic profession, alternatives to better face the challenges that the current national situation presents to higher education, before the socio-economic and national political reality imposes conditions that could be counterproductive to everyone. Efforts in this regard demand that national academic elites assume themselves as part of a broader community that goes well beyond their institutions, in which not only their "meritorious" work is relevant to achieve the goals of Mexican higher education as a whole.

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