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A NEW OPPORTUNITY FOR INNOVATIVE PARTNERSHIP?: A CASE OF MIKTA COUNTRIES

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ABSTRACT

The purpose of this study is to compare the current state of national human capitals of MIKTA countries (Mexico, Indonesia, Korea, Turkey and Australia) in macro scale and to understand whether this political entity has foundations on the human capital basis or not. The state of national human capital shaped by educational policies of current governments is evaluated. Results show that there are two groups of MIKTA countries in terms of their human capitals and sub-indicators. Australia and Korea have a high profile when compared with others. Turkey, Mexico, and Indonesia are in low profile when compared with Korea and Australia. Suggestions regarding the future human capital accumulation strategies are also provided depending on the results.

Keywords: MIKTA; National Human Capital, Mexico; Indonesia; Korea; Turkey, Australia

INTRODUCTION

The world is constantly facing several problems. Common initiatives and inter-governmental efforts are needed to solve these problems in most of the situations. Inter-state collaborations and initiatives are important mechanisms for innovative solutions. International platforms such as the G-7, G-20, which are created by economically and politically powerful states, are making efforts to direct global governance. On the other hand, regional actors, middle power countries (Colakoglu, 2016; Mo and Jongryn, 2014), are striving to establish a link between the demands of respectively weaker countries and trying to propose alternative solutions to global agenda.

MIKTA is an informal alliance established in September 2013 by the ministers of foreign affairs of founding countries to enable their respective countries to be heard in global politics more effectively, act as powerful actors in resolutions of regional problems, and set global agendas by developing common policies (Surdel, 2018). These countries currently have a total population of half a billion and a share of 5.8% of the world's total GDP. They are from diverse cultures, regions and shaped by different institutional settings. However, they are also democracies with open economies and high economic growth rates.They may be in an important position not only by being more active regional political agents but also via the quality of their educated people.

The success of MIKTA like initiatives depends on two criteria. Firstly, they have to build bridges between developed countries and developing countries. Secondly, they also must possess an important position in terms of territory, population, and resources (Schiavon, Domínguez, 2016). There is limited research on MIKTA countries. Existing research is

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mainly focused on formation process and characteristics (Jongryn, 2014; Schiavon and Domínguez, 2016), international politics (Colakoglu, 2016; Heenam, 2014; Wright, 2014), development and cooperation (Cooper, 2014), policy advises for future cooperation, (Govan, 2014), climate change and green growth (Siwon, 2014), and country level policies in MIKTA platform (Dal and Kursun, 2016; Mo, 2016; Mailhold, 2016; Santikajaya, 2016).

Porter (1990) claims that national competitiveness is not inherited but created. The competitiveness of companies depends on where they are located. The national advantage is a result of a combination of four attributes such as factor conditions, demand conditions, the existence of related and supportive industries and firm strategy, structure and rivalry. Factor conditions are related to the existence of skilled labor, and supportive mechanisms those create competitive human capital.

Human Capital is the entirety of the knowledge, abilities, and talents that individuals obtained through formal and informal educations and trainee oriented programs throughout their lifetime. These acquirements are a significant capital that generates production, increased productivity and change both individually and socially (Becker, 1993). The level of human capital is a factor making a difference in lives of individuals; it is also an important indicator of the development of a society which is composed of people. The largest providers of accumulation of knowledge as a change factor are national education, corporate training programs and voluntary programs that individuals participate under their steam (Porter, 1990: 628). Studies carried out regarding positive effects of education on economic and social development also support this view (Schultz, 1961, Denison, 1962, Becker, 1993, Lynham and Cunningham, 2006). Human Capital is a sub-dimension of intellectual capital along with market capital, process capital, social capital and structural capital. There are several studies to compare human intellectual capitals of nations. World Banks Knowledge Assessment Methodology (KAM) is prepared to investigate knowledge-based problems and give future directions to nations (World Bank 2002). The OECD also developed an input based assessment index to measure national intellectual capital. Several researchers conducted research to measure human capital of nations in Arab countries (Bontis, 2004), in Finland (Stähle and Pöyhönene. 2005), in Israel, (Pasher and Shachar, 2007) and in EU region (Weziak, 2007).

Index based comparisons are limited to make comparisons between nations. It is needed to investigate more deep reasons for differences in countries relative positions to each other. The contextual and idiosyncratic analysis is important to understand the current situation of countries.

There are several questions arising to understand whether MIKTA countries possess similar resources and characteristics. Which countries are similar to each other in terms of resources to be called as middle power country? What are country-specific reasons for their relative positions to each other? Are MIKTA countries positions similar to human capital related input variables and output variables? This paper makes an attempt to answer these questions. The answer to research questions will help to understand whether this political entity has foundations on the human capital basis or not.

This paper follows below structure. Firstly, the formation process of MIKTA alliance will be addressed, and information on the current situation of countries will be given. Secondly, definitions of human capital will be reviewed. Later, the macro data sets regarding human capital investments and outputs will be compared. Statistical data sets prepared by governments relating to the status of national education programs including preschool, secondary and higher education, statistics by OECD and database of World Bank and World Economic Forum Data sets will be used to measure and compare the quality and quantity of formal programs which are critical inputs for the accumulation of human capital. Input and output variables will be compared. In the discussion part, the state of national human capital shaped by educational policies of current governments will be evaluated, and suggestions will be made regarding the future human capital accumulation strategies.

1. FORMATION OF MIKTA AND CHARACTERISTICS OF COUNTRIES

MIKTA is an informal alliance established in September 2013 by the ministers of foreign affairs of founding countries to enable their respective countries to be heard in global administration more effectively, act as effective actors in resolutions of regional problems, and set global agendas by developing common policies.

G-7 countries are distinguished from others for being more influential factors in determining global policies. MIKTA has been established to produce alternative solutions in geographies where G-7 countries are not represented, to make countries on middle or upper intermediate level of development heard more powerfully and determined policies in respect of common interests. MIKTA also has other objectives such as having a stronger voice as regional actors, strengthen relations with each other and setting common agendas for resolutions of global problems within G-20 member countries. MIKTA member countries set their plans basing on growing problems in finance, economy, international security and sustainable development and they all have a flexible structure. As they are located in different geographical locations, they have the advantage of carrying their common agendas over a broad geography. It also has an objective to be a bridge between developed and developing countries in global policy. The mission underlying its establishment is playing a constructive role to reduce polarized international tensions and offering different solutions (www.mikta.org).

1.1.Mexico

Mexico is the world's 13th largest economy in gross national product ranking with a population of 125 million and an area of 2 million square meters. Rapidly developing the economy and being a petroleum exporting country are significant advantages of Mexico. It is an important industrial production centre for North America. As it is a member of NAFTA, its production-based economy is mostly the USA and Canada oriented. However, it is a market open to the world for being a petroleum exporting country. 8.2% of its total population is a university graduate. The ratio of employees to the general population is 58.5%. 7.7% of workers are employed in the agricultural sector, 13.7% are employed in industrial production, and 35.7% are employed in the service sector. The unemployment rate is 4.9% (World Bank, 2017).

Mexico has the lowest scores in mathematics, science and reading comprehension among OECD countries according to PISA results. The government has been determining many policies to improve the quality of education in the last decade. For example, nursery school and high school education are made compulsory. Also, policies such as granting scholarships to children of low-income families and making free use of health services have been put into practice. The rate of transition from primary to secondary school showed an increase. The guidance and awareness raising program is initiated for school administrators, teachers, and students to prevent students from leaving their education in high schools. In this context, one-to-one character analyses have been made to make students know themselves better and determine their targets. The program have been implemented in one-third of the high schools in the country. More budget has been allocated for renovation of infrastructures and materials of schools compared to previous years. A performance evaluation system was put into practice for teachers and training programs were organized to train teachers in areas where they were inadequate (OECD, 2013b).

1.2.Indonesia

Indonesia is the largest economic force in South East Asia with a population of 255 million. It is also 16th largest economy in the world. Due to low-cost labour in the country, Indonesia is an important attraction centre for foreign investors from nearby geographies like Korea, Japan, and Australia. The country also offers opportunities for industrial investments with its petroleum reserves and natural resources. It is one of the top three fastest-growing countries among G-20 member countries. The ratio of the workforce to total population is 63.5%, and only 4.5% of its population is university graduates. 21.8% of the workforce is in agricultural, 12.8% is in the industry, and 28.1% is in the service industry. The unemployment rate in the country was 6.2% (World Bank, 2017).

Indonesia confronts serious problems such as managing and improving the world's greatest educational organization composed of 50 million students, 250 thousand schools, and 2.5 million teachers. There are two different educational systems in a country which provide modern and religious educations. Schools providing modern education is 85% of the total schools, and they are controlled by the Ministry of National Education. Madrasas which give religious education are administered by the Ministry of Religious Affairs. When results of PISA are examined, Indonesia's level in mathematics, science and comprehension skills is lower than Mexico. Only 2.6% of the gross domestic product is allocated for education, and this is rather low in proportion to other MIKTA countries. Indonesia is spread on wide geography, and the society is composed of different minorities. Thus it experiences the difficulty of meeting the needs of a rather big mass of students. They try to implement policies to provide inter-regional equality of education which also should comply with ethnic characteristics.

1.3.Korea

Korea administers the world's 11th largest economy. National education policies focused on bringing employees up who are disciplined and equipped with technical knowledge played a significant role in Korea's development. As a result of ongoing educational investments since the 1950s, 25% of the country's population is university

graduates. The ratio of working population to total is 59.1% and 3.8% works in the agricultural sector, 15.2% in the industrial production sector and 43.4% in the service sector. The rate of unemployment in the country was 3.1% in 2015.

As Korea lacks natural resources, it regards qualified workforce as the most important input for development. For this reason, Korea made sizable investments in vocational and technical education in the 1960s to meet the needs of industry. As Korean society regards education the sole remedy to have a higher level of living and climb the social ladder, it is one of the few countries in the world regarding expenditure per student from family budgets. Even though the ratio of private schools in the country is almost 90%, it's hard to mention the existence of private school culture as most of them are budgeted by the state. State monopolizes financial resources and strictly controls curriculum and operation of private schools. This makes it difficult to implement alternative education methods freely.

Alternative schools opened by non-governmental organizations have been sought after apart from schools which provide classic education as of the 2000s. Private teaching institutions and private educational institutions are rather fashionable as there is a race based on matriculation for high schools and universities. Students at all levels spend a good part of their time after school in private educational institutions starting from primary school. This brings along the criticism that an education system which can train creatively thinking individuals is not implemented. However, the country is one of the top three countries in PISA ranking, which is an important indicator of educational outcome

1.4.Turkey

Being an important country due to its strategic location and historical heritage, Turkey is the seventeenth largest economy in the world as a result of the economic stability it acquired in recent years. Struggling to move to an industry-weighted structure from an agriculture-based economy as of its foundation in 1923, Turkey has a broad spectrum industry today ranging from textile to automotive supply industry, from construction sector to electronic and white appliances. Turkey adopted a statist industrial policy till the 1980s, but following Turgut Özal's government, liberal economic policies have been ruled over.

During the Republican era, policies have been pursued to support modernization and industrialization attempts with educational reforms. However, governments frequently changed education policy, and this caused a delay in achieving the expected outcome. During the rule of AKP, rather successful steps were taken to improve the infrastructure of schools, increase the number of schools and decrease number of students per teacher. However systemic changes in primary and secondary education make it difficult to provide stability in education. Despite being appointed by the same government, changes have been made by each Minister of National Education. The curriculum of all educational institutions is controlled by the Ministry of National Education. The proportion of private schools is less than 2%. Compulsory education is 12 years in Turkey, which has the youngest population in Europe. In Turkey, where 8.7% of the population is a university graduate, the unemployment rate is also 8.7%. 10.5% of the workforce is employed in agriculture, 12.1% in industry and 23.3% in the service sector (World Bank, 2017).

One of the asserted reasons for the transformation of primary and secondary education into the 4+4+4 (4-year primary, 4-year middle and 4-year high school) system was the intention to establish vocational secondary schools to set up the substructure of vocational formation of students.

1.5.Australia

Australia is the twelfth largest economy in the world, and it has the sixth biggest surface area. It is the most prosperous country in South East Asia with a gross national product per capita of USD 46.000. The country ranks number two in United Nations' 2017 Human Development Index. 23% of the population is university graduates, and working population is 61% of total population. 58% of the population received university or technical education. The unemployment rate in the country is 5.7%.

The educational system in Australia is as good as systems of many European countries. However, the primary item on the agenda is efforts spread on to increase the educational levels of Aborigines and other native groups. Steps are taken mainly to develop the vocational and technical education of these groups. Improvement projects are being implemented within 1700 schools to reintegrate disadvantaged students into the society (OECD, 2003).

2. HUMAN CAPITAL

Along with critical inputs for production and economic development such as land, capital, and labour, knowledge also began gaining importance as of the second half of the twentieth century. Labour and capital-intensive industries started giving place to knowledge-intensive sectors (OECD, 2001:17). National education policies became more important to educate qualified labour force and put them at the disposal of international production. The content of national education policies which shape the employees who might approach the events from various angles and produce creative solutions gained more importance as a factor would lead competitive advantage.

It is possible to extend the basics of human capital by the time of Adam Smith. According to Smith economic activities can be strengthened not only by collective efforts of workers but also by functional capabilities acquired by all members of society (Smith, 1776). Even though there are some emphasizes regarding the relationship between education and development, the concept of human capital as an economic production factor based on a social accumulation of knowledge has not been used for a long time after Smith. Shultz is the first researcher who had emphasized human capital in 1961. According to him, there is a connection between the level of education and high health standards which are the indicators of quality of human capital and economic development. The necessity of qualitative and quantitative competence of educated employees cannot be ignored in development policies. Shultz suggests that factors affecting people's quality of life also have an additive effect on human capital (Shultz, 1961: 9).

There are two types of capital in economic development. They have tangible (physical capital) and intangible (human capital) characteristics. As human capital is associated with abilities of employees to use and develop technology, it plays a critical role in productivity

growth. The skills gained through activities such as education and training contribute to productivity by increasing human capital. Sharing acquired knowledge with other individuals also provides mutual learning (Lucas 1988). While traditional capital is limited to space and can be utilized only in one place, the spatial dependence of knowledge is lesser (Saygılı, Cihan, and Yavan, 2006: 23).

Bontis (2004) regards national intellectual capital as one of the most critical inputs that can bring diversity into production and provide a competitive advantage. He defines national intellectual capital as the sum of knowledge, experiences, and accumulation which are internalized throughout the chain reaching from individuals to society or potentially existing and can be used to achieve national objectives. According to Bontis human capital is a sub-dimension of intellectual capital and is the sum of knowledge and abilities that individuals have. Human capital is more focused on existing knowledge accumulation rather than the potential. These accumulations are gained as a result of all educational activities in a country, including national education activities (Bontis, 2004: 14-15, Bontis, 2004: 20).

OECD (2001: 19), on the other hand, does not limit human capital only to educational activities but draws a broader frame. All kinds of knowledge and communication skills, consensus culture facilitating mutual understanding and agreement, knowledge networks between individuals can also be included in the concept of human capital. Beginning within the family and from early childhood, compulsory education involves a long chain which extends along vocational training and lifelong education. Also, technical training provided at work and knowledge accumulation gained from personal networks and memberships can be included within the scope of competencies provided by civil society.

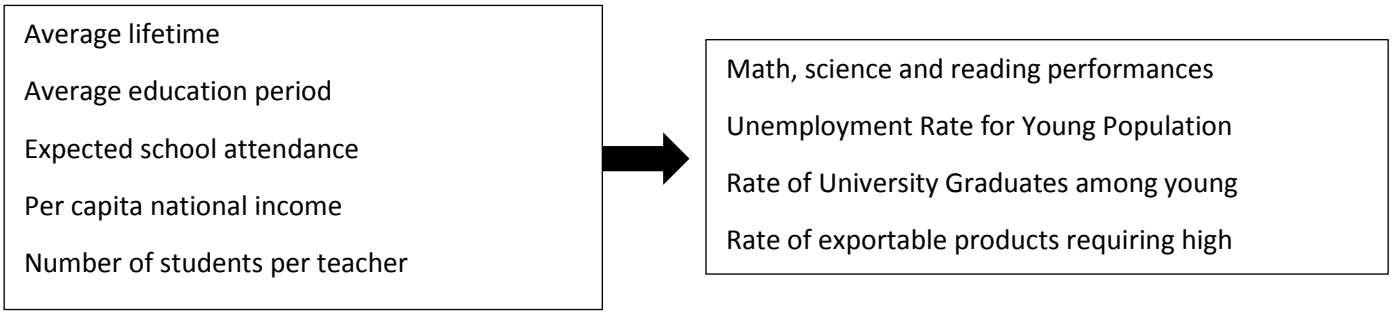
National education policies are one of the most valuable inputs for the accumulation of human capital. Along with compulsory education, corporate training, formal or informal vocational training and continuing education activities also contribute significantly to this build-up (Porter, 2011:218; Porter, 1990:628; Becker, 1993:20). The Baltic States like Finland, Sweden, Switzerland, and Holland are always at the top of innovation indexes and OECD's PISA ranking, and this would be significant evidence regarding the link between education and innovation (www.globalinnovationindex.org).

The intangible features such as entrepreneurial ability and intuitive competence and tangible factors such as health, the rate of researchers to total population, the efficiency of women in production and average lifespan should also be assessed together with human capital (Lin and Edvinsson, 2011: 4).

2.1.National Human Capital States of MIKTA Countries

This research is based on in-depth definitions made in the literature by OECD (2001) and Lin and Edvinson (2011) regarding the components of Human Capital. The researchers suggest that all kinds of activities providing social improvement, facilitating production processes, increasing utilization of knowledge, mutual communication and overall wellbeing of the nation have an influential effect on human capital. Concerning the possible emergence of satisfactory outcomes as long as there are inputs (investments) to increase national human capital, the comparison will be made within the frame of below model.

Figure 1: Inputs and Outputs in Human Capital Model



Source: Adapted from Lin and Edvinson, 2011, p: 19; OECD, 2001, p: 19-20.

2.2.Human Capital of MIKTA Countries with respect to Highest Achiever

The aim of this research is to compare human capitals of MIKTA countries whether if they have similar characteristics or not. This can be done in two steps. The first step is to compare input variables for national human capital and the second step is to make thesame comparison with output variables. This decision results in 8 variables for inputs and 4 variables for outputs. The country with the highest value was determined for each sub-factor in order to relatively calculate sub-factors to form the human capital index for each country. All other countries' data were divided into the data of the country with the highest value and multiplied by 100. For instance, in order to determine Turkey's relative score of education budget as a percentage of its GDP, its value (2.9) is divided by highest countries value (5.1 for Australia). Turkey's score on educational expenses is resulted (2.9/5.1)*100 = 56. After these calculations had been made for each of sub-factor and all countries, equal weight is given to each sub factor to get a total score of each country.

Like each compound index, the sub-factors that constitute the index and their impacts on the total weight are debatable. However, previous investigators (Bontis, 2004; Lin and Edvinsson, 2011) have used similar methods to get the final scores. Relative human capital score with respect to highest achiever and total weight scores for each country can be seen at table 1 and table 2 and figures 1 and 2 below.

Table 1: Relative Scores of Human Capital of MIKTA Countries with respect to Highest Achiever for Inputs

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**Total**
Mexico	93	66	64	38	50	94	61	12	59
Indonesia	85	58	63	21	84	54	81	2	56
Korea	98	92	85	73	73	98	100	100	90
Turkey	91	59	72	25	77	56	67	22	59
Australia	100	100	100	100	100	100	99	52	94

1. Average Lifetime, 2. Average Education Period, 3. Expected School Attendance Period, 4.Per Capita National Income, 5. Number of Students per Teacher, 6. Educational Expenditures (% of GDP), 7. Enrolment Rate to Educational Institutions, 8. R&D/GDP

Figure 2: Relative Scores for Human Capital Input Variables

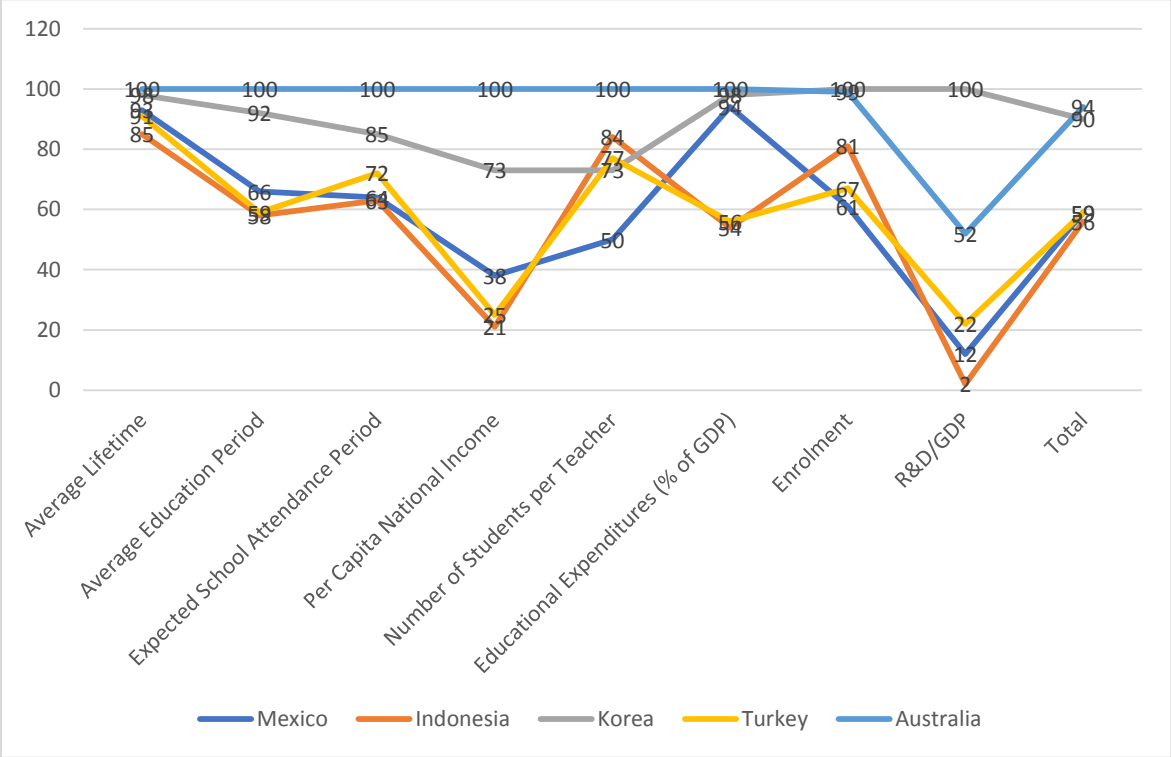
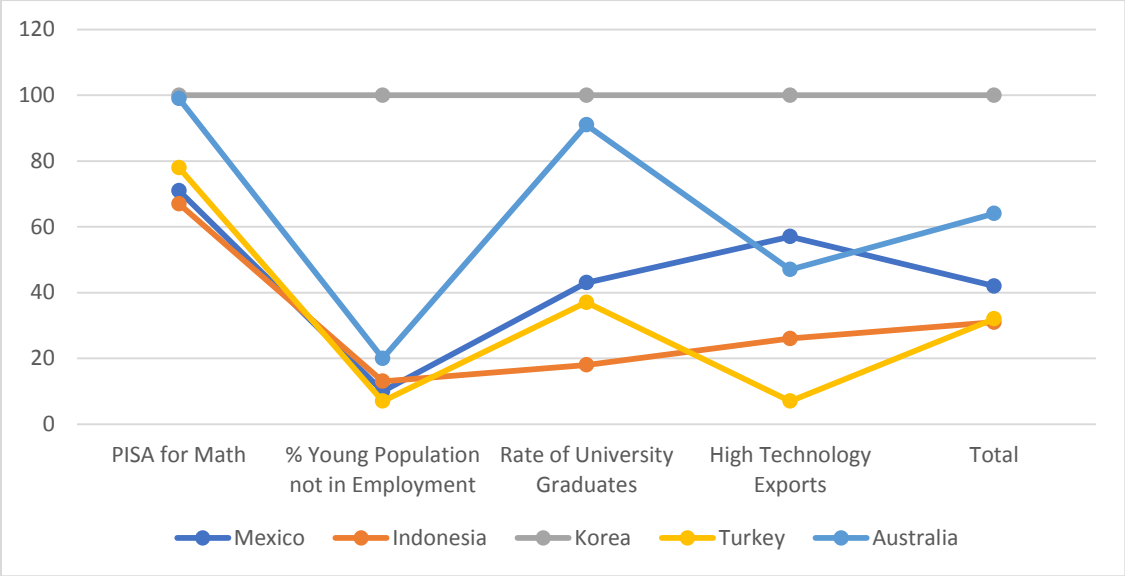


Table 2: Relative Scores of Human Capital of MIKTA Countries with respect to Highest Achiever for Outputs

	1	2	3	4	Total
Mexico	71	10	43	57	42
Indonesia	67	13	18	26	31
Korea	100	100	100	100	100
Turkey	78	7	37	7	32
Australia	99	20	91	47	64

1. PISA for Math, 2. The percentage of Young Population Not In Employment, 3. Rate of University Graduates, 4. High Technology Exports

Figure 3: Relative Scores for Human Capital Output Variables



RESULTS AND CONCLUSION

Acquiring knowledge and using it for a long time is a time-dependent variable. In this respect, the small number of students per teacher would increase the intensity of interest. The level of welfare of the state and the share of budget allocated for education provide an educational environment with more modern resources and allow teachers to focus on education without having financial difficulties. The country which is in the best state among the countries compared regarding Human Development Index, average lifetime, average education period, expected school period and education expenditures is Australia. Australia and Korea have similar figures to each other. On the other hand, Turkey and Mexico are at the middle level. Indonesia has the lowest indicators in all areas.

15-19 is an important age group which support productive power of countries in a short term. If it is considered that high school graduates would start working at the age of 19 and university students at the age of 23, the youth in this age group should have the technical competence to meet the needs of the sector within four to eight years. When countries are compared, the highest rate of school attendance as of 2012 is in Korea and followed by Australia. Indonesia is in the middle level for enrolment rates. Turkey and Mexico have similar values to each other.

An important factor which would make a difference in production and service and provide a competitive advantage is the rate of expenditures for R&D activities. Being able to offer innovative products and services without imitating competitors is proportional to investing in R&D for long years. The importance attached to R&D activities underlies the successes of leading global companies in their sectors.Among MIKTA countries Korea is in the first place for R&D investments. Indonesia has the lowest value.

The age range of 20-24 is important for countries as it is a period when high school graduates begin to work, and careers of university students will commence after a short period. Young people who are not in employment and education or training in this age group

are also defined as the risk group by OECD as they would be exposed to social exclusion. Korea is in a good position for young employees. Turkey is in a very position having 36% unemployment rate for youngsters.

The rate of university groups in currently employed population might be used as a criterion to assess general knowledge level of society. 24-64 age group is the age group that can directly contribute to national human capital as they use, develops and share knowledge. Korea and Australia have similar values and having a high rate of adult university graduates. Indonesia has the lowest rate among MIKTA countries.

An important criterion regarding the extent of utilization of difference-making knowledge is the ratio of the goods produced by using advanced technology and needed by other countries to total exports. This rate is also a useful indicator of the extent of the tendency of human capital to use high tech. Turkey has a rather low ratio as compared to other countries. There is a difference of 5.18% with its closest follower, Indonesia. It can be concluded from this table that Turkey has a great need for human capital who can utilize high technology efficiently and produce.

Results show that there are two groups of MIKTA countries in terms of their human capitals and sub-indicators. Australia and Korea have a high profile when compared with others. Turkey, Mexico, and Indonesia are in low profile when compared with Korea and Australia. Mexico and Turkey have similar overall scores in input variables. Indonesia and Turkey have similar scores for overall human capital related output variables. The results indicate that Turkey and Indonesia have a weak infrastructure regarding average education period, educational expenses, research, and development rate, a young population not in employment, number of university graduates and high technology exports. Suggestions regarding the future human capital accumulation strategies are also provided depending on the results.

DISCUSSION

Youth population is an important resource for the competitiveness of nations. It can be recommended that youth who would/could not enrol in educational institutions should be trained to gain occupational competence as early as possible.

It is thought-provoking that the rate of young population in the age group of 20-24 who are not in employment and formal education is one-third of the whole age group for Turkey and one-fourth of the whole age group for Mexico. Young people who are not in employment and education or training in this age group are also defined as the risk group by OECD as they would be exposed to social exclusion. This could be assessed as they don't have an income to earn their keep and they lack sufficient technical competence to find a job. It can be estimated that the reason for them not working in any way would be lacking the required qualifications of the sector even though they have completed their mandatory education and graduated from a university. In this respect it is the duty of the state to both create new employment opportunities and gain the technical competence to meet the needs of the sector.

Education plays a significant role in the establishment of human capital. Education in Korea, Turkey, Mexico and Indonesia is being governed by a state-centric approach. Due to its character the state keeps pace with change rather slowly and instead of productivity, bureaucratic mechanisms and numeric values come to the forefront. Policies allowing the agility and creativity of private sector to reflect more on educational sector should be developed.

Private educational institutions do not only include primary-middle-high schools and universities but also institutions which would provide all kinds of basic and vocational consolidation. The role of support courses, study centres and reading halls in closing the gap between students who have better amenities in big cities and the ones who have scarce opportunities in small cities cannot be ignored. Official or unofficial support courses shall always be active as long as the exam-oriented educational system exists. Rational policies aiming holistic and systemic improvement should be pursued instead of local prohibitions.

In this case, a model to discover abilities and fields of interest in advance, improve them and match up with the needs of the sector should be developed. It is evident that infrastructure construction, roads, dams, heavy industry investments and production are essential for economic development. But weight would be given to educational investments towards information sector which makes it possible to obtain more outcomes with less cost. Policies pursued by India to train programmers and informatics technicians would be taken as an example in this respect.

Research and development investments will lead to competitiveness in the long term. Indonesia and Turkey are in a weak position in this area. Further policies should be developed to establish a good infrastructure between the private sector, universities, and government agencies.

MIKTA countries have a rather high potential of human capital in middle and long-term due to their young population. Education has very strategic importance not to be commended to individuals, fads, daily politic conflicts, and unanalysed decisions. In this respect, it should be improved via shared wisdom by taking opinions of academicians, experts, families, students and different political parties in the country. It has great importance to be administered in cold-blood, independent of political agendas and with sensitivity to construct a shared future as it affects lives of every segment in country one way or another.

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