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Can Crowdsourcing Create a New SOE (State owned Enterprise, Kamu İktisadi Teşebbüsleri, KIT) Approach ?

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Abstract

In this study, crowdsourcing practices and platforms ((Kitle-Kaynaklandırma Uygulama ve Platformları, KKUP) are discussed with the guidance of studies that are openly accessible from academic and practical sources. With the presupposition that there is a basic knowledge and awareness of KKUP in the reader's perspective, more detailed and concrete information about them, various and striking examples from the prac83tical experience will be given in this context, and based on these examples, the positive and open to improvement aspects of KKUP will be tried to be revealed. As a result, it will be put forward as a forward-looking idea whether a new KIT (Kamu İktisadi Teşebbüsleri in Turkish, State Owned Enterprises) can be developed, which is unique to Turkey, and a model for other countries such as Kazakhstan, based on crowdsourcing studies and other new innovative systems as collaborative endeavors between public and privateorganizations.

Keyword

Crowdsourcing Applications Public Economic Enterprises (Soes), Crowdsourcing Apps And Platforms, Human Resources Management, Digital Transformation And The Public Sector, Digital Marketing

1. As an introduction, what is KKUP?

Today, KKUP is involved in literature and practice as a new model of innovation and management (Nguyen 2022). Various positive and negative aspects of crowdsourcing applications and platforms, which are gaining more and more diversity and prevalence, are also revealed by various studies. For example, on the one hand, various platform examples are appreciated with flexible working conditions that generate income for employees and qualified data science studies that support artificial intelligence studies. On the other hand, it can take criticism of the abuse of the human force that they employ (for example, Appen ve Amazon MekanikTürk), (Capilnean, 2021). Accordingly, Appen, for instance, delivers high-quality training data and quality assurance services for autonomous vehicle manufacturers. Ability to combine 2D and 3D datasets enables Appen to support industry's most complex machine learning training data requirements (Glassdoor,

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2022) Amazon's Mechanic Turk makes possible to ubiqutiuously work from phone and computer (Vincet, 2014).

Considering all these aspects, it is thought that KKUP has many aspects that can be taken as an example and lesson for Turkey. Various remarkable academic and practical studies and initiatives on this subject are also seen more and more day by day. For example, the crowdsourcing project opportunities offered by Havelsan within the scope of the Open Innovation Platform is a recent initiative that is note-worthy (Çağlar, 2019).

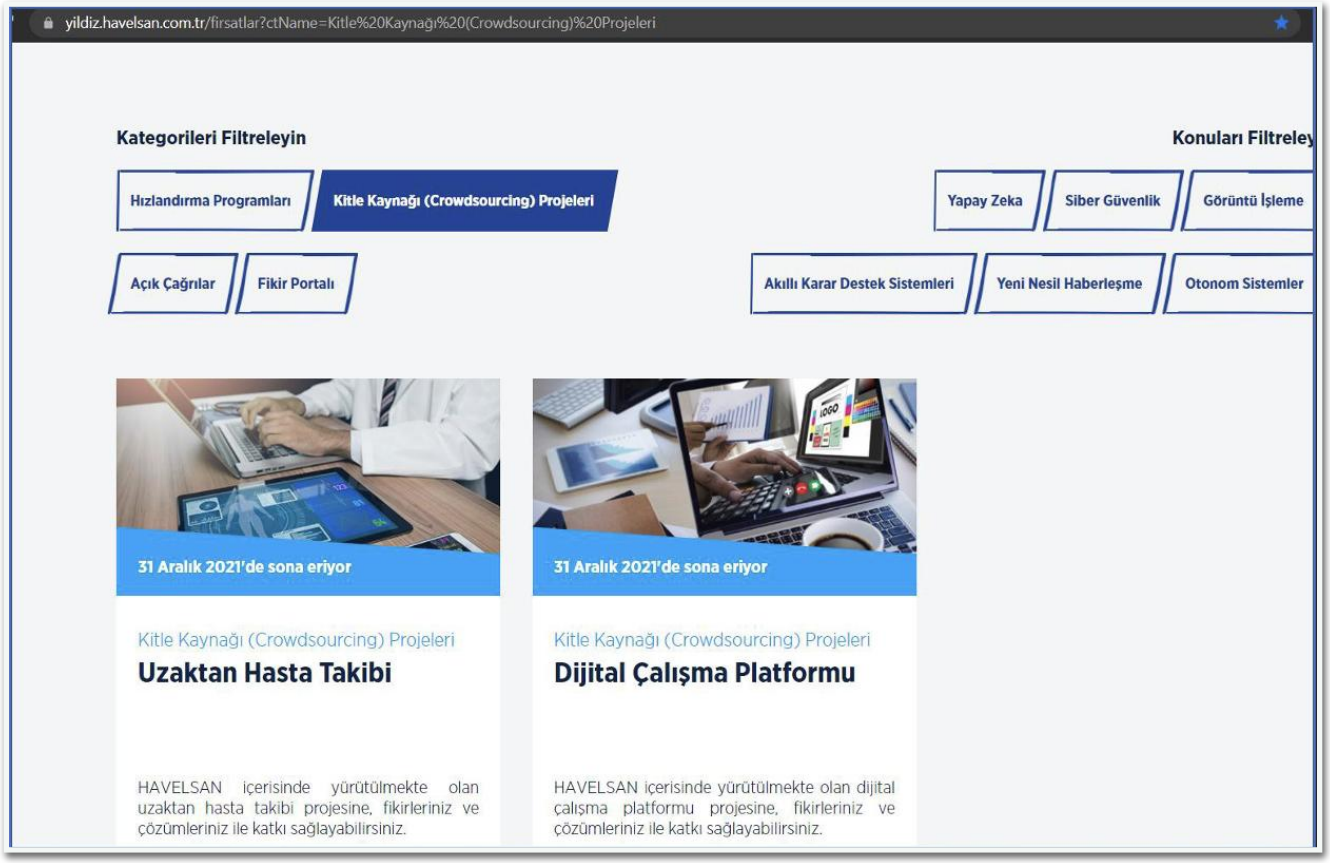

Fig. 1 *(KKP, Havelsan, 2022)*

Crowdfunding can also be used as a new generation alternative public finance method, as different implementations in the world and Turkey would examplify. For instance, again, in Turkey, it is seen that the number of practices aimed at both gaining monetary rewards and contributing to beneficial personal or social outputs and effects in return for undertaking the predetermined tasks is increasing day by day. It is known that in some of these applications, which encourage the increase in the number of steps obtained by simply walking, the inspections of public places such as gas stations in terms of cleanliness and hygiene are also included in the scope of the application (Google Play Store, 2022)

In this paper, based on openly accessible sources and contents, more detailed information about KKUP that can be guiding for developing newer public-private collaborative initiatives will be shared.

The Use of Crowdsourcing and Applications Platforms for Digital Marketing and Other Management Functions

Search Engine Optimization is one of the areas where KKUP is used most frequently today. In this case, various information and content acquisition and classification studies aimed at meeting customer

expectations and satisfaction attract attention. It is thought that these studies can be harmonized with digital marketing and sales funneling approaches. For example, many KKUP's project tasks (sometimes supported by location data or QR codes) are designed in accordance with the perception of customer expectations and intentions and presenting the most appropriate advertising (Ad) options to (potential) customers in response to their searches. It includes marketing and sales activities aimed at improving the processes of directing to Landing Pages and sales and completion (for example, Appen Arrow, Lionsbridge projects) (PassLioness, 2020).

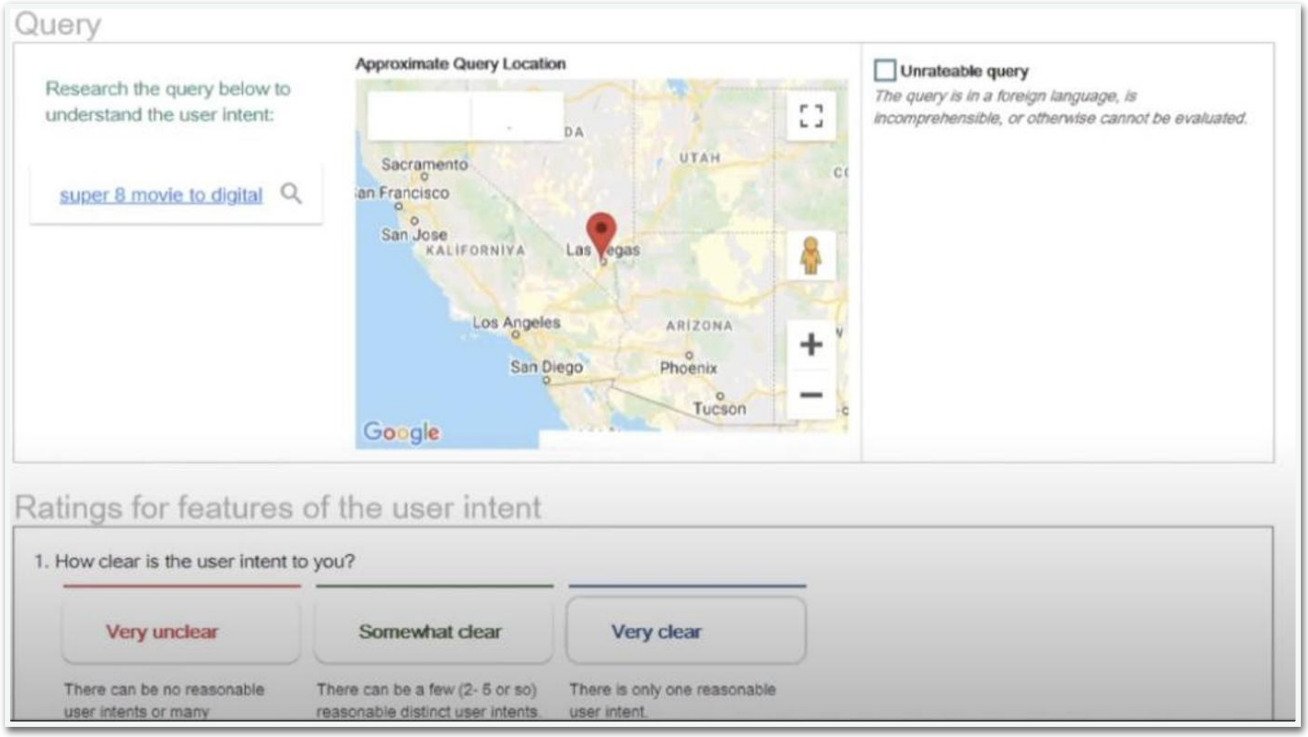

Fig. 2 *(Kadir Bakmaz, 2022)*

Again, in many KKUP projects, tasks and processes are supported to collect, label and classify textual or visual information and content, and to decide whether they are suitable for presenting to the relevant target audience user profiles, and to show (or not be show) to certain types of users, especially for certain purposes. For example, various Transperfect, Lionsbridge, and Appen project tasks can be seen within this framework. For instance, it may be requested to evaluate whether the relevant content has religious content in a project task (DataForce 2022, Exam, Pay & More, 2018). Various works can further be exemplified in this context, from captioning porn videos to tagging screenshots of terrorist-organisation-affiliated videos or classifying images and figures that are against the content control policies of Fortune 500 companies (Milland, 2019). Data trainings that contribute to the development of artificial intelligence algorithms are also supported with these studies within the scope of Search Engine Optimization, some of which require basic knowledge of local or general culture, and some require a certain level of knowledge in areas such as language or logic (LearnAction, 2020).

In addition to such studies on pre-sales (marketing) and during-sales processes, there are also various KKUP projects that focus specifically on post-sales or more general social media interactions. For example, in the Appen Amur project, users who purchase products sold on selected social media platforms are asked to evaluate this purchasing experience, including product delivery and quality, through a tool within the scope of Social Media Evaluation. The products purchased according to certain criteria (for example, automobile accessories) remain with the participants of the project and the related fees and expenses are paid back to them.

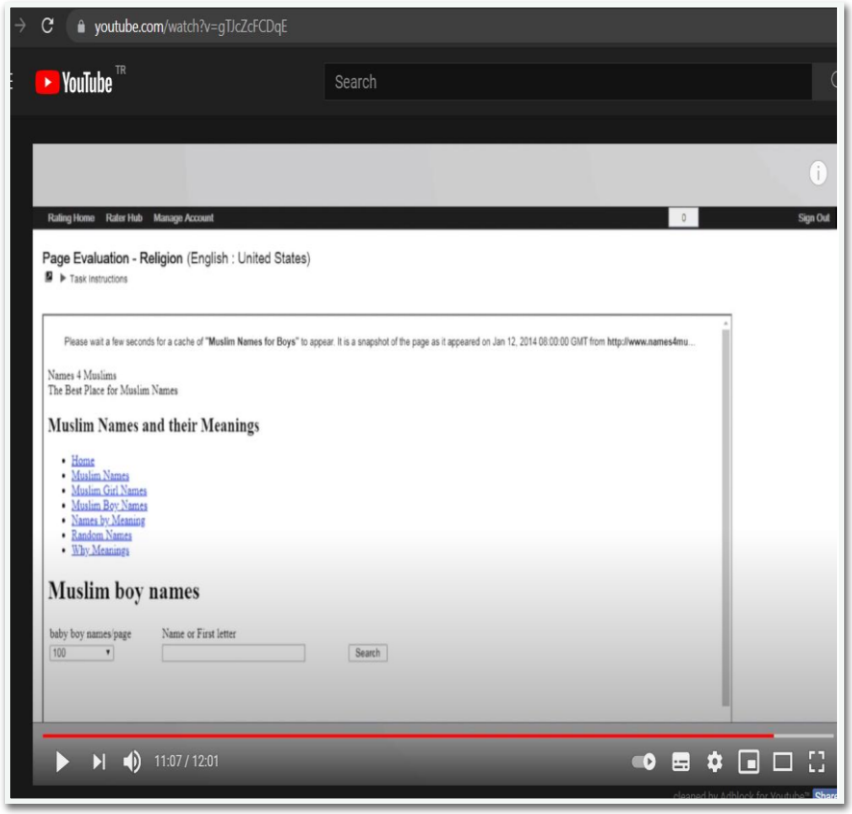

Fig. 3 (*Appen Exam Answers I How to Pass Appen Arrow Exam? | Arrow- Lionbridge Personalized Ads Assessor,10:48 onward.)*

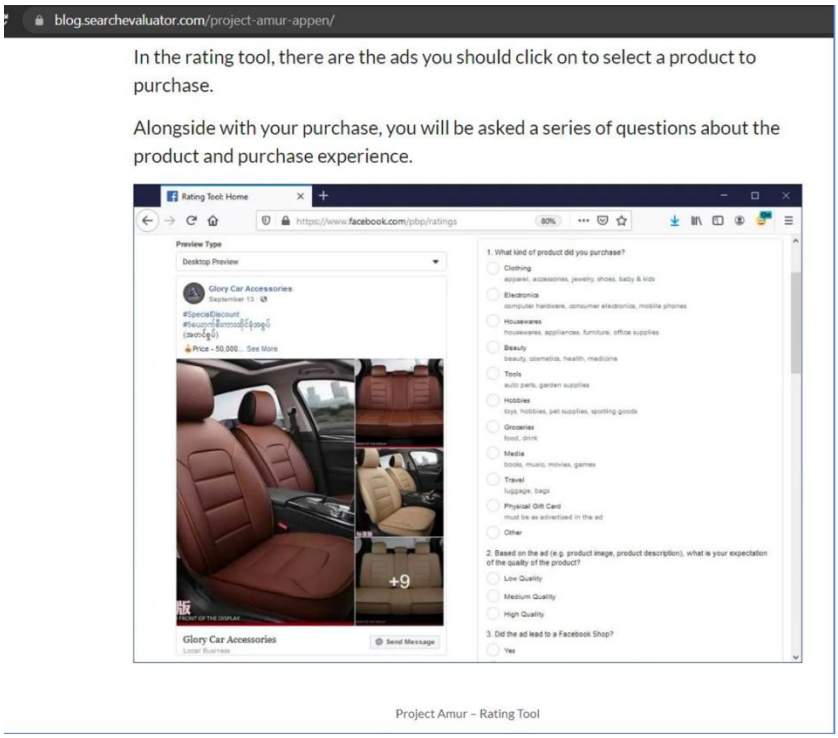

Fig. 4 (Rating Home, Facebook Page 2022)

Again, for example, in the Falcon project, which is carried out on the Appen platform and whose corporate customer is understood to be Facebook, the shared posts are interest tagged (Allen, 2017). In addition, there are various KKUP works, especially in terms of information reliability and verification. For example, the Uolo project on the Appen platform workes to investigate and evaluate the claims in the video content in Facebook using the relevant SRT Facebook tool.

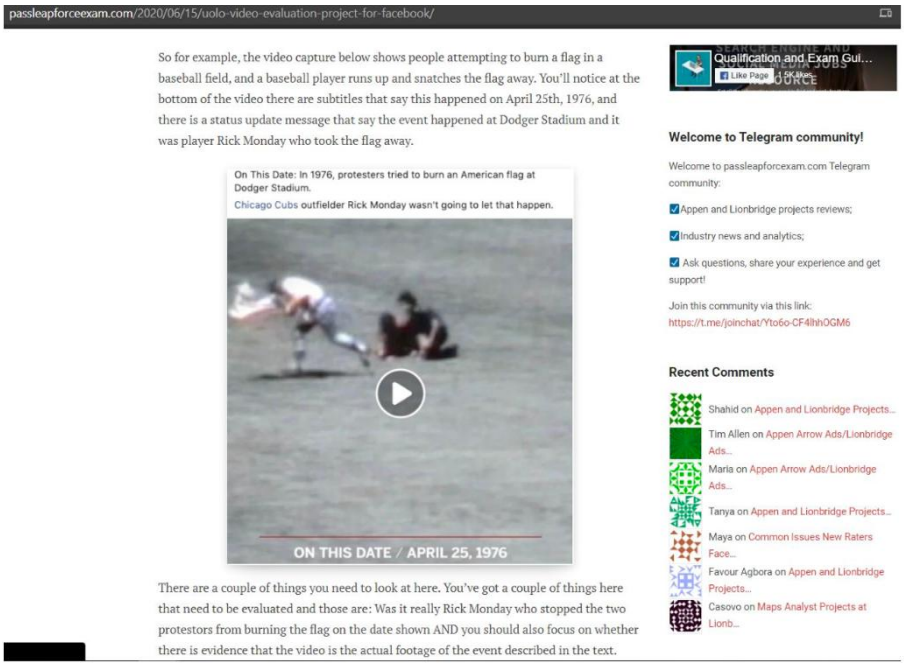

Fig. 5 (Appen Platform: First Time User Guide, Appen Success 2022)

Again, on the Appen platform, there is the Ogden project, in which the SRT Facebook tool is used to understand and evaluate whether the ads on Facebook will be wanted to be seen by people and if they do not, what would be the reasons for this (Allen, 2017).

With the prevalence of this type of project work where examples can be multiplied, it has been also observed that there has been an increase in the open information-sharing activities of third parties in recent years, even though the confidentiality provisions are valid within the projects themselves (in addition to those sources such as Appen) (Allen, 2021). In fact, there are various educational materials for how to be involved in the related projects and how to be admitted into the related works. These include various in-service and pre-service training videos and exam simulayon applications (and their advertising videos).[i]

Content and works like these also provide various information about KKUP's Human Resources functions and approaches.

The approaches of the KKUPs to Human Resources Management

Among the academic and practical studies put forward within the scope of KKUP, the extent to which these have changed or will change the work life has an important place (Schmidt, 2015). In addition to these holistic evaluations regarding the management of work life and human resources, some more specific and detailed information on how KKUP's functions such as recruitment, in-service training and performance evaluation work are also openly accessible on the Internet.

For example, inability to meet various quality standards such as minimum working hours or accuracy rate, or not using multiple accounts or failing to comply with administrative and technical rules such as IP address

conflicts/Internet connection sharing issues are some common problems encountered by new evaluators (raters) in the process of adapting to projects. Parameters such as Task Completion Rate can be used to control work productivity. For example, 45-50 tasks per hour or 1-1.3 minutes per task are met as reasonable, but situations that are well below or above this can be questioned. The criteria and related parameters may vary depending on the nature of the task (Allen, 2018(a)).

There may be disagreements between the employer and the employee regarding the practices aimed at increasing the quality and performance of KKUP's work, and various problems and problems related to the solution of these can be encountered in reality. In particular, in cases where the work is billed manually by the employee, not automatically by the system, the inconsistencies between the working hours suggested by the employee and the measurement parameters used for the control of the system, and the problems encountered during the elimination of these inconsistencies are among the first to stand out. In some cases, such problems may result in the dismissal of employees from the respective KKUP projects (Allen, 2018(b) & 2019(a)).

Situations such as the failure to provide the necessary support during these troublesome processes and experiences, and in some cases where employees think that they have been wronged and treated with inequality or injustice in some conflicts with the employers, have a negative impact on the evaluations of KKUP (Indeed, 2022).

As one example that worths underlying, Amazon's Mechanical Turkers want to be recognized as 'actual human beings: “Users signed up to Amazon’s 'crowdworking' marketplace Mechanical Turk say they're tired of being marketed as algorithms for cheap labor and have started a letter writing campaign asking Amazon CEO Jeff Bezos to recognize them as "actual human beings [...] who deserve respect, fair treatment and open communication” (Vincet, 2014). Such matters, as discussed at the beginning of the study, support the the aspects of KKUP that need improvement that complement the positive aspects. On the other hand, considering the characteristics of KKUP that brings employees and employers together, various information regarding the employer side can be given in a way that complements the employee side.

Employer Side of the KKUP

There are also various studies in KKUPs that present approaches and services for employers. For example, CloudFactory puts forward the issues such as a talented workforce, accountability for results, reliable quality, flexibility and scalability, and open cost structures to its customers to differentiate itself from other KKUPs (Wilson, 2017). Again, for example, Appen explains in the Appen Success Center how test questions should be prepared in order to ensure quality and how those who answer the questions will be evaluated in the guide prepared and presented for the first users of the Figure Eight platform, which is included in its business portfolio.

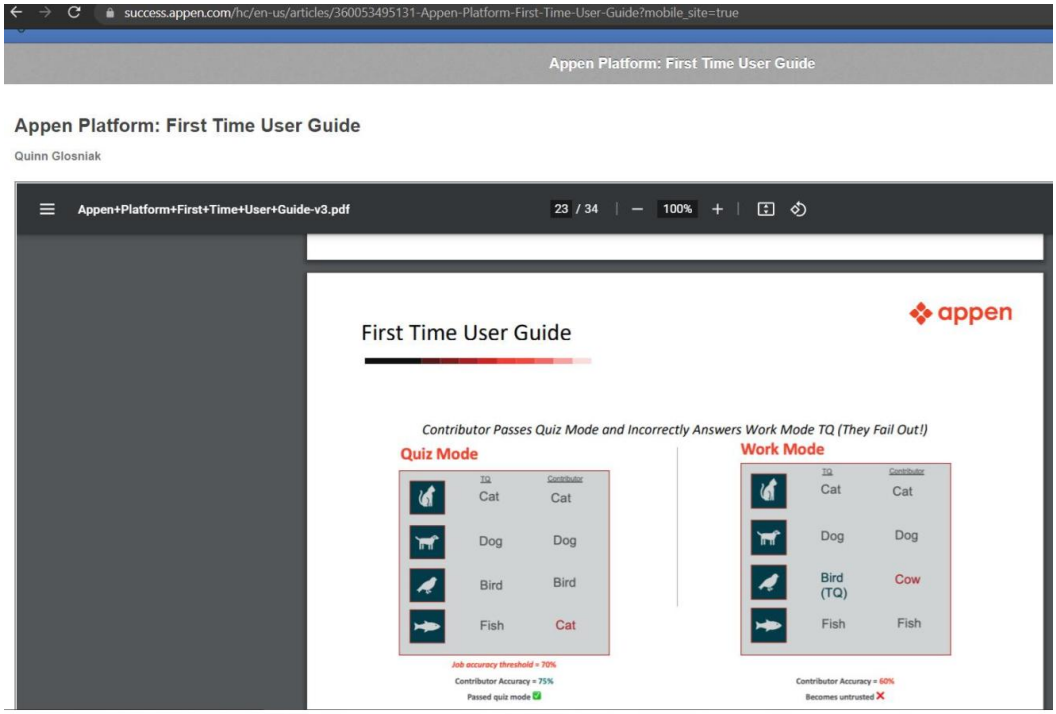

Fig. 6 *(Guide To Enterprise Analytics, Appen Success 2022)*

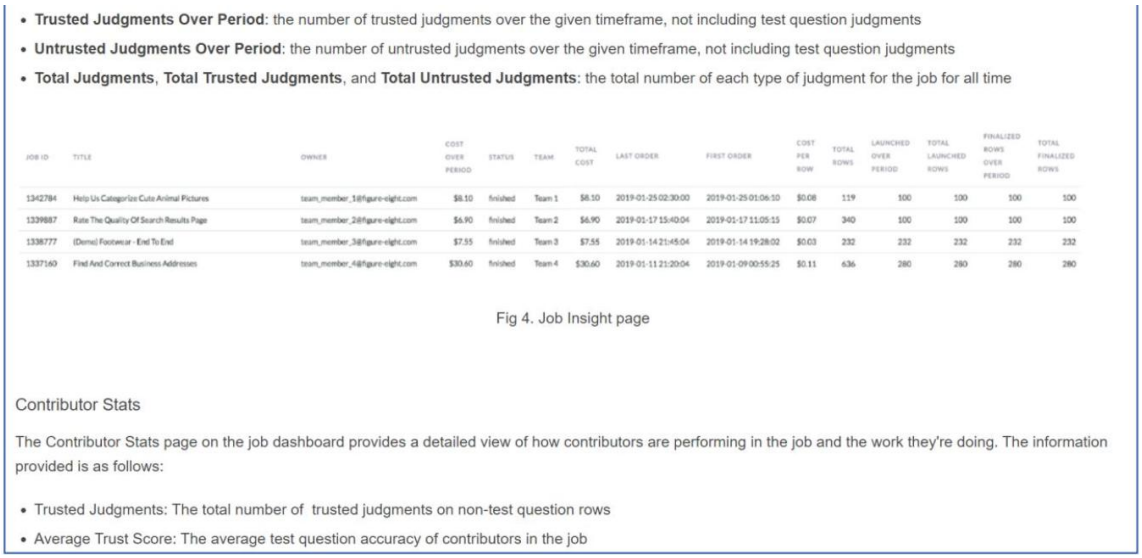

Fig. 7 *(Guide to: Advanced Analytics Page, Appen Success 2022)*

The Appen Success Center also has a variety of methods and indicators put forward as Enterprise Analytics. Accordingly, various analyzes can be performed on the basis of Business or Contributor. In this way, for example, evaluations can be made on Reliable Judgments individually or in total and at the end of a certain period.

In addition, confidence scoring for a total of a job can be made. As for more advanced analysis, for example, High Agreement (HA) and Low Agreement (LA) percentages for performing quality controls can be seen. Thus, it can be understood in which situations different contributors can give common answers (HA) or not

(LA) to task questions, and accordingly which situations are more subjective, ambiguous or difficult can be determined.

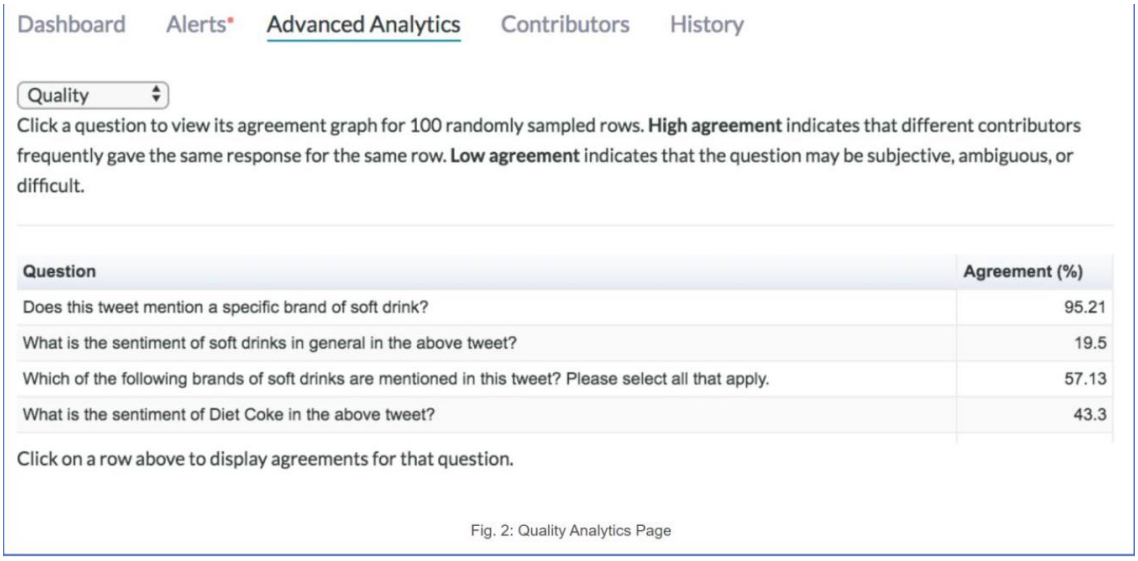

Fig.8 *(Dijital Türkiye Endeksi 2021 Basın Lansmanı TBD, 2022)*

On the other hand, employees may have various tools and methods that they can use. Among them, for example, various productivity-enhancing and tracking applications (such as RaterAide, LBTimer) are suggested (Allen, 2016). Again, as an example, it is recommended to use browser history, which shows the time elapsed in activities, to be used in KKUP projects belonging to Google or other employers (Allen, 2019(b)) (for instance, https://myactivity.google.com/myactivity).

Surely, another important point regarding these issues is how the data of both customers and employees as individual users are collected and used by the relevant vendors and employers (Indeed, 2022). At this point, the privacy and protection of personal information, and in this context, information security and reliability issues come to the fore in KKUP Projects. Essentially, at this point, it is thought that the different expansions and derivatives with respect to the roles of ordinary user, worker, employer and intermediary gradually reveal. For example, large employers and vendors collect information on individual users as potential or existing customers in order to increase their income, on the one hand, and employ individuals through KKUP (in some cases using this and similar information) in order to realize and develop these service sales. As a result, while individual consumers are willing to engage in activities that spend their time, such as watching advertisements, in order to benefit from some products and services for free, they also often benefit from jobs that make money by watching advertisements or filling out surveys through KKUPs.

In conclusion, a University-Industry-Civil Society Cooperation Model / Implementation Proposal for Turkey through Prospective KKUP.

In line with the digital transformation, important works are also carried out in Turkey. Various civil society, private and public institutions have accelerated their relevant studies in line with current developments. For example, with the pandemic, technology support and artificial intelligence use studies to support educational

activities are becoming increasingly important in educational institutions that focus on open and distance education. Surely, the hopes and opportunities that come with them also bring administrative and ethical concerns and great responsibilities (Şenocak, 2020). The latest artificial intelligence strategy prepared by the Presidential Digital Transformation Office (DDO) is also one of the recent examples of digital transformation initiatives (Resmi Gazete, 2021). Again, as an example of the role that public and state institutions will undertake, intentions and approaches for the evaluation and evaluation of public data through the private sector, which aims to "convert public data to diamonds with the private sector" can be given (Gazete Vatan, 2021). In general, it is considered that it is possible for the state to take responsibility for the development of the intermediary and implementer role undertaken by KKUP in accordance with the open innovation approach, and triple, quadruple or quintuple spiral innovation models (Sevsay et al. 2017) (TBD, 2020).

Arnkil et al (2010), defines quadruple helix as an innovative environment, where individuals, business ventures, higher education institutions and government cooperate with the aim to generate innovative ideas and projects. (Arnki*l*, et al.2010). The main idea is that the listed stakeholders (civil society, industry, university and government) cooperate towards an innovate result and contribute based on their expertise. Therefore, the role of civil society is no longer limited to using goods and services only, nowadays civilians are active participants of the innovative and digitalized processes.

In this digital transformation process, where individual and corporate roles are increasingly intertwined, positive effects and benefits such as increased performance and efficiency in the work carried out, or guaranteeing user rights and privacy can be achieved thanks to this responsibility undertaken in the public sphere. Accordingly, a new model can be developed by utilizing the good aspects of KKUP practices and improving the aspects that need improvement. For example, in the organization of appropriate public institutions, various projects for the development of citizen or customer services can be presented to the use of the participants in accordance with KKUP approaches, these works can then be audited and managed in a measurable and accountable way with the institutional performance evaluation methods of KKUP. On the other hand, by improving the support and solution services that users need when they have problems, a cultivating approach can be put forward where rights and privacy are much better secured than these at existing KKUP practices.

This type of approach may also herald the transition from State-Owned Enterprises to Crowd-Sourcing approaches. An approach of this nature can turn into an application that can pave the way for improving the positions and practices of large international technology companies that are being questioned more and more today, taking into account social and economic benefits, and in this context, can set an example for the world. Some recent studies also support these approaches. For example, the Digital Turkey Index (DTE) study put forward by the Turkish Informatics Association (TBD) both distinguished and correlated household members with their social characteristics and corporate initiatives with their economic characteristics, depending on a suitable digital need hierarchy relationship. Based on this framework, the 2020 digitalization index of Turkey has been calculated.

Accordingly, basic vital needs for individuals occupy a lesser place at the lowest level, while relational needs with society occupy a greater place at the highest level. For institutions, basic vital needs occupy a greater place at the lowest level, while relational needs with society occupy a lesser place at the highest level. A role in regulating the legal socio-economic relationship between these individuals and institutions has been proposed to public institutions within the framework of the ecosystem (EcoDiurnal, 2022). In the future, it can be expected that this hierarchy of needs relationship for the institutions will evolve in line with that of individuals, and the role of the state may also be reshaped in this case. Artificial assets, which may emerge as a hybrid of individual and corporate assets, could accelerate this process, as well. In the following years, it is planned to repeat the DTE measurements by improving the concept and application framework in collaboration with institutions such as DDO, Ankara Yıldırım Beyazıt University (AYBU) and TBD.

To support these studies, AYBU E-Government and Public Transformation Program graduate students carry out analysis on the Public Service Inventory (Service Inventory Management System, https://envanter.kaysis.gov.tr/). The services selected from the public institutions serving in various vital areas

are examined, and determinations and suggestions are made in the direction of existing service improvements and new service suggestions.

Accordingly, it is envisaged that providing the human capital and administrative and technical infrastructure that will support the education and training of KKUP-related information, both in universities and in public institutions, will have extremely beneficial results for Turkey. At this point, it is thought that the citizen science approach will support and complement these innovative studies (TEBD, 2020).

Particularly, within the scope of university-industry cooperation studies, it is thought that supporting co-creation processes, including civil society, as part of the Four Spiral Innovation System understanding, will gain a significant momentum thanks to KKUP's initiatives. It is foreseen that if these initiatives are designed and executed with a focus on social responsibility and sensitivity to the natural environment, they can also contribute significantly to the Five Spiral Innovation System (Medeni & Aktaş 2010).

However, some scholars argue that implementation of quadruple or even five-helix models might be challenging, since the civil society is extrimely heterogeneous (Roman et al., 2020) Therefore, in order to encourage the participation of the fourth helix in social innovations, an accurate quadruple helix model needs new ways of cooperating with the stakeholders. To facilitate civil society engagement, the government must adapt present techniques to the needs and expectatons of specific groups.

It can be evaluated that the implementation of Quadruple and Five-Helix Spiral Innovation Systems Related to Society, Economy, Democracy and Social Ecology, which can meet various needs in the digital age, will also provide one of the necessary conditions for the transition from the information society to the wisdom or information society (Medeni & Aktaş, 2010). Informatics, which is meant here, emphasizes knowing together in accordance with the root of the word, knowing in this context and being able to agree with each other as all common stakeholders with whom we share this life.

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