GOVERNANCE IN INTERNATIONAL PADDY INDUSTRY VALUE CHAIN

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ABSTRACT

This study examines the requirement of the governance or regulations in paddy farming. To achieve a self-sustainable level of rice production, with the aim to ensure food security in the country, System of Rice Intensification (SRI) which is an organic cultivation method for paddy has been introduced in Malaysia. Using qualitative and field evaluation method, this study has conducted six in-depth interviews and 32 field evaluation on both organic and inorganic paddy farming. This study found that there are two leading organic agriculture regulators in the world which are IFOAM and USDA. Major difference between IFOAM and USDA is that IFOAM allows private standard setters to define their own additional criteria and set threshold levels that are above European minimum requirement. On the other hand, USDA does not allow others to set a standard that are above the federal. In Malaysia, organic farming is monitored by the Ministry of Agriculture and Agro-Based Industry Malaysia under MOS. Only 28 organic farms in Malaysia are eligible to use organic labels and are aligned with the organic production regulation by the government. This study also shows few of organic accreditation in several Asia countries including Thailand, Indonesia, Cambodia, Japan, India and China. Moreover, this study provides important understanding and a clear picture of the conventional plantation and organic plantation of paddy in Malaysia. It is important especially for the Research and Development (R&D) department to improve the quality of paddy production to meet all the requirements set up by the governance of the chain. Therefore, this research serves as a reference for Malaysian government, in achieving the objective of National Agricultural Policy to lure the bio economy in Malaysia.

Keywords: *Food security, governance, organic, organic accreditation, paddy farming, system of rice intensification (SRI)*

1. INTRODUCTION

67% out of 2.7 m Metric Ton of rice consumed, was locally produced (in Malaysia), the rest imported primarily from Thailand, Vietnam, and Pakistan. The movement of organic farming was started as early as in the 1920s. However, it has recently become an issue, of worldwide concern due to the rise of pesticide residues and food contamination in raw food (Somasundram et al., 2016). Thus, to promote global food security, integrated agricultural with organic farming is a popular alternative (Ciccarese and Silli, 2016). The growing public interest in organic food which is deemed to be healthy and safe is pushing organic farming to a whole new boundary. In Malaysia, tremendous growth is seen in the size of organic farms with 131 hectares in 2001 to 2367 hectares in 2006. However, the local organic food industry is yet to be sustainable as 60 % of the organic food in Malaysia is imported (Somasundram et al., 2016). Among the organic products that are imported include fresh raw food of vegetables and fruits, processed food such as cereal, beverages, and grains (Dardak et al., 2019). The main staple food in the country is rice and the growth of paddy is being monitored and adopted under the Ministry of Agriculture and Argo-based Industry (MOA) (In-depth Interview, 2018). In the National Agricultural Policy, it is targeted to lure the bio-economy and, Malaysia is striving to achieve a self-sustainable level of rice production to ensure food security in the country (In-depth Interview, 2018).

However, a study by the World Bank claimed that Malaysia paddy industry is neither profitable nor sustainable (UD.o.A 2017). Thus, apart from the introducing granary area as an approach for sustainable paddy farming, system of rice intensification (SRI), a cultivation method for paddy is also being introduced in the county to increase the yield of paddy (Indepth Interview, 2017). In Malaysia, organic plantation is regulated under the Malaysia Organic Scheme (MOS) (Indepth Interview, 2018).While internationally, the International Federation of Organic Agriculture Movements (IFOAM) and the U.S. Department of Agriculture (USDA) are the main regulators of organic agriculture. Consistence regulatory and monitoring by these bodies would enable the assurance of food quality to consumers.

2. OVERVIEW OF ORGANIC FARMING

According to the USDA, a sharp increase of the organic industry is recorded. 37,032 certified organic operations have been recorded in the year 2016 as compared to a value of less than 10, 000 before the year of 2006 (USDA, 2017). Meanwhile, the survey by The Research Institute of Organic Agriculture and IFOAM in 2015, shows that there are 43.1 million hectares of organic agriculture in 2013 with the majority of the land are from Oceania (40%), Europe (27%), and Latin America (15%). Asia only records 8% to the total land area per se with North America coming next at 7% and Africa at 3% (Somasundram et al., 2016). In Malaysia, only 0.01% of its occupancy was allocated for organic plantation. Comparing to the neighbouring country, this figure is incomparably low as the Philippines has a value of 0.68%, Vietnam with 0.35% coverage, Thailand with 0.16% and finally Indonesia with 0.16% (Utusan Malaysia, 2015). Organic plantations have been tested to have a higher amount of nutrient and antioxidant level by 11 folds. Organic food is said to be 25% more nutrient-dense as compared to conventional food. This would mean that a lower amount of food is needed for higher nutrients level (Mokhtar, 2013). Organic farming means managing crops with natural fertilizers such as manure or compost instead of synthetic fertilizers (In-depth Interview, 2018). Enzymes and plant-based pesticides are also chosen over chemicals and insecticides to control pest and weed (Mokhtar, 2014).

2.1. Definition of Organic Farming and its Regulation

The idea of an organic farming surfaced during the 1920s. Since then, much debate has been going around the globe for the definition of "organic". Among the first definition of organic was by IFOAM in 1972 which believes that organic agriculture should be a production system that sustains the health of soils, ecosystems, and people. It should rely on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. IFOAM 1972 also believes that organic agriculture that combines tradition, innovation and science would benefit the shared environment and promote fair relationships and a good quality of life for all involved. The principle of ecology mentioned that organic agriculture should be based on living ecological systems and cycles, work with them, emulate them and help to sustain them. Whereas, the principle of fairness and care is organic agriculture should build on relationships that ensure fairness about the common environment and life opportunities. It is also managed in a precautionary and responsible manner to protect the health and well-being of current and future generations of the environment (IFOAM, 2017). For the European Union specifically, the state authorities have developed the European Union Regulation, 1991 (EU-Eco-regulation) for 190 of its organization members in 32 of the European countries (IFOAM, 2017). There are only two leading organic agriculture regulators in the world namely IFOAM and USDA. The definition of USDA on organic farming is the integrate cultural, biological, and mechanical practices that foster cycling of resources, promote ecological balance, and conserve biodiversity (USDA, 2012). USDA is regulated by the National Organic Program (NOP) that was developed in 2000.

This regulatory body is only responsible for developing the national standards for organically produced agricultural products in the exemption of food safety and nutrition (USDA, 2016). The major difference between IFOAM and USDA is that IFOAM allows private standard setters to define their own additional criteria and set threshold levels that are above the European minimum requirement. Whereas, for the USDA, they do not allow others to set a standard that is above the federal unless there are at the presence of a specific environmental conditions where necessary stricter standards are required (Bostrom & Klintman, 2008). Certification process of organic farm and organic product, however, are not done by IFOAM and USDA. They are merely the accredited agencies that will be appointed to carry out these certifying processes in accordance with the regulation. Among the accredited agency for IFOAM are Biocert International and Australian Certified Organic. Whereas, for USDA, some example of their accredited agency are Quality Assurance International and SCS Global Certificate (USDA, 2017). Among all the agencies, there are also agencies that already obtained the accreditation from both IFOAM and USDA such as the Australian Certified Organic. Relationship between these organic regulators can be seen in Figure 1. While the major organization that holds both IFOAM and USDA regulation for international trading is Codex Alimentarius by the World Health Organization (WHO). From the two-main organic farming regulator in the world, countries around the world have adapted and adopted these regulations under a certain ministry's portfolio to be implemented in their respective countries as seen in Table 1. For example, in Malaysia, organic farming in the country is monitored by the Ministry of Agriculture and Agro-Based Industry Malaysia under MOS which was launched in 2002 (Suhaimee et al., 2016). Since 2003, 170 farms in Malaysia had registered for the organic label. However, only 28 organic farms are eligible to use organic labels that are aligned with the organic production regulation by the government. In August 2009, the Ministry of Health in Malaysia has amended the food regulations in 1985 to ensure food products that are labelled with the word "organic, biological, ecological and bio-dynamic" complied with the labelling requirements of the Malaysian Standard MS 1529:2001 which is "*The Production, Processing, Labelling and Marketing of Plant-Based Organically Produced Foods*". This means that any agricultural product labelled as organic must be MOS certified (KPIAT, 2017).

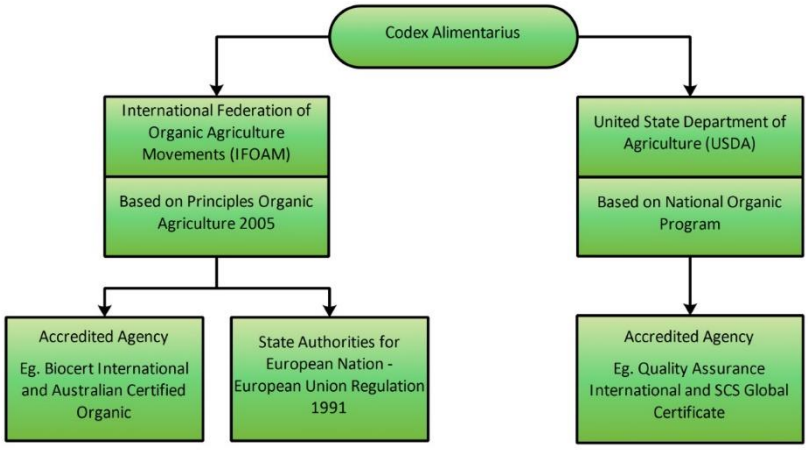

Figure 1: Main regulator of Organic Farming at the International Level (Own compilation)

However, recent market demand for organic labelling has driven the narrowing of organic definition to merely "chemical-free" farming in general (In-depth Interview, 2018). This has greatly voided the initial idea and passion for organic farming. The current idea and definition of organic farming is modified and adjusted to all stakeholder involved such as the producer, consumers, and regulations (Seufert et al., 2017).

In general, some of the common organic labels can be classified into genetically modified organisms-free (GMO-free), Natural, Organic and 100% Organic. GMO-free refers to products that are not genetically modified using modern technology and remain in its original condition. Natural refers to food items that are produced without additives, preservatives, colouring and flavouring. However, natural product does not mean organic. Whereas, organic for non-raw ingredients such as cookies, honey and cereal, organic label only means 70 % of its ingredients are organic. 100 % organic label on the other hand, can only be found in a single-ingredient food or raw food such as fruits, vegetables, and eggs. This label would normally come with a legal seal by certifying country (Mokhtar, 2014).

3. METHODOLOGY

This study conducted both a literature review, in-depth interview as well as field evaluation method to compare value chain of conventional-inorganic versus SRI-organic plantation in Malaysia. 6 in-depth interviews were conducted with farmers and agricultural government officers in 2018. Field evaluations were conducted for both organic and inorganic paddy farming in three states in Malaysia namely Kedah, Kelantan and Pahang in 2017. Out of 32 subjects of samples, 29 are conventional and 3 are organic farms. The field evaluation were made based on activities and farming process on the upstream part of the value chain in 2017. The field evaluation are compared to the previous literature on phases of activities in paddy farming. As for value chain analysis framework, the review covers as follows:- 1. The definition of organic and inorganic 2. General activities in both organic and inorganic farming 2. Input source in farming activities 3. The internal and external governance in a value chain and accreditation compliance between Asia countries.

4. FINDINGS

4.1. Organic Accreditation Compliances in ASIA

Table following on the next page

Table 1: Organic Accreditation in Asia (Own Compilation)

Country	Certification	Compliances	Year	Logo	Sources
Malaysia	Malaysia Organic Scheme (MOS)	Malaysian Standard MS1529:2001	2002		Suhaimee et al (2016)
Thailand	Organic Agriculture Certification Thailand (ACT)	IFOAM accredition from International Organic Accrediation Service (IOAS)	1995		Win (2017)
Indonesia	Organik Indonesia	Indonesia National Standard SNI 6729:2010	2002		Shiotsu et al (2015)
Cambodia	Cambodian Organic Agriculture Association (COrAA)	Standards for Organic Crop Production and Production Standards for Chemical-Free Crop Production	2006		CorAA (2017)
Japan	JAS Seal	Japanese Agricultural Standards adopted from Codex guideline	2000		-
India	India Organic	National Standards for Organic Production	2000		Industry (2014)
China	China Organic Food Certification Center (COFCC)	National Standard of the People's Republic of China: Organic Products GB/T19630-2005	2001		Centre (2011)

5. CONVENTIONAL VERSUS ORGANIC PLANTATION IN MALAYSIA

Based on the updated record in year 2016, only 49 farms in Malaysia that are certified by the local government agency of myOrganic or MOS Malaysia and of these 49 farms, only one, is of paddy plantation. This paddy plantation with 9.464 hectares is located in Sik, Kedah owned by Koperasi Agro Belantik Sik Berhad (Jabatan Pertanian, 2017).

The first initiative of organic farming started in Kahang, Johor by a company named KOREF on a 260 acres land. Based on the reviewed paper, KOREF was the first farm to obtain the full certification of organic status from the Malaysia Department of Agriculture in December 2005 (Othman, 2012; Othman, 2016). Organic paddy farming is unpopular in Malaysia because it is not included as an organic product by the Department of Agriculture even with its huge market potential (Othman, 2016). Paddy plantation in Malaysia can easily be divided into two major phases (cultivation and management). As for the cultivation phase, it is divided into conventional farming and application of SRI farming (Chapagain et al., 2016). Whereas, for the management of paddy plantation, farmers may adapt to organic farm management or inorganic farm management (Chapagain et al., 2016). The difference between both the managements is the usage of organic versus inorganic fertilizer, insecticides, and pesticides. Inorganic fertilizers are normally chemical type, which includes urea fertilizer, Kieserite, Muriate of Potash (MOP) and Nitrophoska 15:15:15 which may come in small pieces, pellets, powder or liquid form. Whereas, for organic fertilizer, it is normally produced manually by farmers using microbes or plant that would undergo a decaying process. Alternatively, these organic fertilizers can be obtained from suppliers that are manually produced by composting such as bokashi, kuntan and green fertilizers (Othman, 2012).

5.1. System of Rice Intensification (SRI)

Farming of organic paddy in Malaysia is mainly cultivated using the SRI method, which has been introduced in Malaysia since 2009 (In-depth interview, 2018). This is a method that has been developed in the year of 1983 in Madagascar with the aim to achieve high yield with well-managed resources of water and fertilizers (Othman, 2016). However, this method has been debated over the years due to its inadequate evidence of yield advantage with SRI over conventional method (Dobermann, 2004; Sheehy et al., 2004). Nevertheless, SRI provides an alternative way of sustainable paddy farming where the application of SRI system is a step forward to increase and obtain a higher yield and a better managed of resources such as reduction in water usage (In-depth interview, 2018). This is contrary to the green revolution standard where yield is increased by improving the genetic potential of crops whereby more chemical inputs are used to trigger better yield output (Chapagain et al., 2016). To further develop the applicable system of SRI in Malaysia, a Memorandum of Understanding was signed in year 2011 between the Federal Land Consolidation and Rehabilitation Authority (FELCRA) Training & Consultancy Sdn. Bhd and an NGO in Indonesia, Nusantara Organic SRI Centre which kick-started in Selangor farm (Othman, 2016). By the year 2017, SRI was implemented in Sabah, Sarawak, Perak, Kedah, and Kelantan (Pilo, 2017).

5.2. Value chain of Conventional-Inorganic and SRI-Organic Plantation in Malaysia

The value chain is a tool to analyse the applied technology and processes before being applied to the supply chain and distribution and it was first developed in the 1960s. The idea of this tool is to increase the share of value by the farmers from production to consumption as strategies that can be developed from each of their core activities (Othman et al., 2016). The development of value chain is presumed to be able to facilitate the change of behaviour, transforming relationships and empowering the private sector. Although value chain analysis is quite common, value chain analysis on organic rice is hardly found (Othman, 2016). An enormous number of 2.6 million tons of paddy is harvested each year with the paddy grain is priced at RM 2 billion. However, in terms of food security, Malaysia has yet to achieve a satisfying level with the SSL achieved in year 2014 was only 71.4% (Malaysia D.o.S, 2015). This huge amount of harvest involved more than 100 000 farmers nationwide. Thus, an in-depth study on the paddy value chain is required to ensure the increase of supply of paddy production and its sustainability.

This is in line with the Malaysia National Agro-Food Policy which is set to replace the Third National Agriculture Policy (NAP3) which aim to increase food production in the country (Siwar et al., 2014). The upstream of the value chain of paddy farming is mainly the farmers. While the downstream of paddy farming include rice millers, rice collectors and traders, wholesale traders, retailers, and food processors (Doberman, 2004). Farmers are the main actors in organic paddy farming. The involvement of farmers do not only constrain within the plantation, but they were involved greatly in determining the types of equipment, fertilizers and weeding which are done manually by the farmers and in every stage of the paddy production (Othman, 2012). Thus, production cost in organic farming would be much higher as compared to conventional farming. Although in conventional paddy farming, the involvement of farmers in all stages are also undeniably significant, much of their duties can be eased by ready-bought pesticides and herbicides. Unlike organic farming with SRI management, 38% to 54% of extra labour is required (Rakotomalala, 1997). Value chain in paddy farming include phases of pre-production, production, and post-production with farmers involving at each stage. Table 2 shows the deviation of the phases involved between the organic plantation which are primarily led by SRI system and conventional non-organic plantation based in Malaysia. In organic plantation, no genetically modified seeds are allowed. Irrigation of SRI-organic farming too reduces the amount of water used as the depth of water required is also much lower. In terms of fertilizers and pesticides, an organic plantation only allows organic fertilizer and manual weeding together with pest control using an insect's food chain (Othman, 2012).

Table 2: Comparison of activities in Conventional- Inorganic and SRI-Organic Farming

Phases of Activities	Activities of the Value Chain	Conventional – Inorganic	SRI-Organic
Pre-production Farmer	Input provider/ Seeding	Agro-chemically treated seed are used and genetically modified seed is allowed.	Organically grown seed of at least 8 generations and no genetically modified seeds are allowed.
	Preparation of land	Soil are first ploughed with tractors, then twisted to a depth of 10 – 15cm	Similar method is applied with an additional step called distance tools where seeding is planted at a predetermined distance.
	Water Management	Depth of water in paddy field range from 5 – 10 cm	Depth of water in initial stage range from 2 – 4 cm, where it will gradually dry out before harvesting, thus less water is required.
Production	Fertilizer	Fertilizer and pesticides used are normally of those commercially available.	Only organic fertilizer is used. They normally self-processed by the farmers.
	Pest Control	Herbicide and pesticides/poison to control weed growth and pest.	Weeds are discarded manually usually with an equipment. While, natural method such as spraying tobacco water with neem seeds, oil lamp and insect's food chain.
	Harvest	Paddy are harvested at the maturity rate of 85%	Although generally organic paddy is harvested at near 100% maturity, case study in Malaysia organic paddy are harvested at 85% maturity as well.

Source: Indepth interviews (2018) and field Evaluation (2017), Othman (2012); Raghavendra et. al. (2014)

Conventional plantation of paddy which relied heavily on chemical fertilizers to increase the harvest yield is not sustainable. As this will be a direct chain effect involving many key players. For instance, in Indonesia, as the subsidies for fertilizer were reduced or eliminated as in the Philippines and Nepal, the fate of a small-scale farmers were on a bleak as they could no longer afford the cost for these inputs (Chapagain et al., 2011). While in Malaysia, only minimal fertilizer was used in accordance to the subsidy given. No additional fertilizer was used even though it could produce higher yield as they could not afford the additional cost (Ibrahim & Mook, 2014).

6. CONCLUSION

Since the beginning, the Malaysian government has been supportive of organic farming including matters pertaining to certification standards and their rules and regulations (Tiraieyari et al. 2013). While the myOrganic accreditation scheme is still not recognized by the certification (Suhaimee et al. 2016). This shows that it is achievable even though some of the general import and export requirements tend to be strict, it is imperative for the Malaysian government to comply with the external rules and regulations to maintain and safeguard the local products. Few studies elaborated on the challenges facing organic farmers regarding the certification. Like any policies pertaining to compliance of the rules and regulations, it is crucial for the relevant authorities to monitor compliance. The challenge as rightly noted by Sutinen and Kuperan (1999) is "there is little or no recognition of how policies and the policy process may affect the extent of compliance with regulations." Quite commonly when there is no compliance, the blame is on the enforcement which is either inadequate or inefficient. Currently, the rules and regulations pertaining to compliance of external requirements are still vague as the field of organic and organic paddy specifically is still at infancy. In addition, there is lack of adequate information on the quality of certification systems in Malaysia, hence it is important for further study to explore this issue.

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MODERN IMPERATIVES OF PROFESSIONAL ORIENTATION IN ECONOMIC AREAS OF TRAINING AT A REGIONAL UNIVERSITY

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ABSTRACT

The specifics of the Russian higher education sector are the acute competition between universities for students under conditions a «demographic pit». Amid the increasing stratification of universities, attractiveness grows for youth the educational programs of " branded" government-supported universities, research (sectoral) universities and federal universities. In these circumstances, it is much more difficult for regional universities, which are predominantly regional labor market-oriented, to attract students. In this context, it is increasingly important to understand the general nature and root causes, sources, driving forces of the vocational guidance of young people conducted at the regional university. The aim of the article is to identify the socio-economic imperatives of vocational orientation in the regional university like a local operator of higher education. The research hypothesis is that university professional orientation provides the basis for using the unique capabilities of regional universities to create competitive advantages for their students by detecting and assessing the anomaly of labor supply and demand in the labor market. The methodology of the study is based on a theoretical analysis of the results of scientific works, which present the basic provisions on professional orientation. The paper analyzes empirical data that characterize the persistent and regular socio-economic relationships that are found in the vocational guidance processes of students in the economic field of training at the regional higher school. Regional educational institutions of higher education are the object of observation, implementing educational programs of the bachelor's degree in the major group of directions "38.00.00 Economy and Management" in Novosibirsk in 2015-2018. Scientific novelty consists in the development of the theoretical and applied imperatives of forming the consumer value of professional orientation in the university: the modern concept of vocational orientation is justified, the terms «triad of vocational orientation» and «consumer value of vocational orientation» are introduced into the managerial circulation, the author interprets the concept of «design of vocational orientation», interpretation its socio-economic content, essence. The theoretical and applied provisions and conclusions of the study allow to identify and forecast favorable opportunities and risks of improving the vocational orientation policy of regional universities, and to improve their image in the market of educational services.

Keywords: *Consumer value of vocational orientation, Professional orientation, Regional university, Students, Vocational orientation, Vocational orientation triad*

1. INTRODUCTION

An important system-forming social institution defining the conditions for informed and self-determined professional positioning of young people in the market labor division of system in accordance with the specific educational situation in general and the values adopted in the sphere of vocational educational is the educational institution of higher education - the higher school. The vocational orientation in higher school - is an organic part of the professional orientation of able-bodied persons, in the framework of which the student's personal

understanding of himself as a subject of professional careers takes place (Sotnikova, 2015, p. 102). A consistent professional orientation in the university as a system of equal interaction between students and higher schools is ultimately intended to improve the quality of life and the efficiency of the life orientation of students. At present, the specifics of higher education sector are the acute competition between universities for students amid the increasing stratification of "Russian universities in terms of volume and sources of financial support, with overestimated obligations to raise the salaries of faculty-teaching staff, resulting in a lack of funds for maintenance of the property complex and provision of training process" (Abankina, 2016, pp. 30-58). This increases the appeal for youth the educational programs of "branded" government-supported universities, research (sectoral) universities and federal universities. In these circumstances, it is much more difficult for regional universities, which are predominantly regional labor market-oriented, to attract students. "Meanwhile, regional universities in Russia's higher education system are key universities for both the regions themselves and the country as a whole» (Grinkrug, Tolstoguzov, 2013, pp. 24-25). In this connection, the focus of research interest is the socio-economic imperative development of the vocational orientation in the regional university as a local operator of higher education. The objectives of the study are to adapt the contents of the modern concept of the vocational orientation in a higher school to the realities of time, to structural and functional analysis of the vocational orientation of students in a higher school, to systematize strategic alternatives to vocational orientation from the point of view of universities and students. The hypothesis of research is that the university professional orientation provides the basis for using the unique capabilities of regional universities to create competitive advantages for their students by detecting and assessing the labor market anomaly of supply and demand. Scientific novelty consists in the development of the theoretical and applied imperatives of forming the consumer value of professional orientation in the university. Regional educational institutions of higher education are the object of observation, implementing educational programs of the bachelor's degree in the major group of directions "38.00.00 Economy and Management" in Novosibirsk in 2015-2018. The subject of the study is sustained and regular socio-economic interrelationships, found in students' professional orientation processes in economic areas of study at the Regional Universities. Scientific novelty is the development of the theoretical and applied imperatives of forming the consumer value of the professional orientation in the university. Regional educational institutions of higher education are the object of observation, implementing educational programs of the bachelor's degree in the major group of directions "38.00.00 Economy and Management" in Novosibirsk in 2015-2018. The subject of the study is sustained and regular socio-economic interrelationships, found in students' professional orientation processes in economic areas of study at the Regional Universities.

2. SOCIO-ECONOMIC ESSENCE OF PROFESSIONAL ORIENTATION: LITERATURE OVERVIEW

Professional orientation as research object has been the focus of science for decades. The interest in studying this phenomenon and process, its scope, intensity and causes is not accidental, as it most vividly reflects many important processes of professionalization of able-bodied citizens, which reflect the dynamism of labor market competitiveness. An analysis of the available literature on professional orientation has highlighted three conceptual scheme that reflect the different views of the researchers on the content and essence of the phenomenon and process under consideration. Representatives of the first conceptual scheme believe that professional orientation is a factor in meeting personal labor needs (Reshetnikov, Zubkov, Chistyakova, Zakharov, Gorelov, Sharoshenkov, Pryazhnikov, Pryazhnikova, Odegov, Zhuravlev, MudriK, Osipov, Nasonova, Krylova, Prushinskii, Zeer, Perdrix, Stauffer, Masdomati, Rossier, Vassoudi, Wheeler, and others).

Meeting personal labor needs is based on "formation of the valuable and semantic core … of the individual, namely, i.e. the most important things " (Sharonov, 2017, p. 23), relevant to his interests and expected success, as a result of familiarizing himself with the specificity of the chosen profession (Zulunova, 2011, pp. 31-34; Nemtseva, 2004, p. 17; Kong, Chrung, Song, 2012, pp.14-16; Minchington, Thorne, 2012, pp. 14-16; Valitova, Starodubtsev, Gorianova, 2015, pp. 739-747). Supporters of the second conceptual framework the consider the professional orientation as a function of satisfying public (market) need for labour of a certain quality (Shishkina, Levitov, Klimov, Gellershtein, Bekhterev, Platonov, Konstantinovskii, Shubkin, Yakimov, Chernyaikin, Klark, Sarukhanov, Frantsuzova, Valitov, Batyshev, Kovrigin, Solov'ev, Gorianova, Starodubtsev, Valitova et al.). Professional orientation is presented as a system of rules and norms "directed to take into account the need for the optimal distribution of labor resources for the benefit of society" (Pryazhnikov, 2002, p. 34), that promotes "opporten involvement in public production, rational placement, efficient use and save to work" (Sotnikov, 2016, p. 103), "training personnel for the economics, their rational distribution and consolidation" (Mitina, 2014, p. 11), attracting talents to the economy (Perdrix, Stauffer, Masdomati, Vassoudi, Rossier, 2012, pp. 739-747). Under the third concept (Geleta, Dement'eva, Sokolova, Sotnikova, Kibanov, Nemceva, Kozlova, Minazhetdinova, Chrung, Kong, Minchington, Song, Thorne and others) the professional orientation is presented to the researchers as focused activities for "scientific and practical preparation … for free and independent choice of profession" (Endal'tsev, 1982, pp. 31-34) "in accordance with the desires, inclinations and the developed abilities and the needs of their future specialty" (Vuorinen, 2013, pp. 24-33), as "a system of forms, methods and means of influence on the person, based on the recording and development of personal abilities and qualities necessary for successful professional activity" (Sotnikova, 2014, pp. 60-65), as "a step-by-step decision-making process by which the individual creates a balance between his interests and propensity and the needs of the division of labor system in society" (Chistyakova, 2007, p. 32), "by which increases the personality priority, responsibility for reasonableness and the results of decisions increase" (Apostolov, 2011, p. 21), choosing the direction of professional competence development (Ford, 2011, pp. 76-85) and employer brand (Kong, Chrung, Song, 2012, pp.14-16). In other words, in this context, professional orientation is a different type of activity of the subject, allowing implement for the personality choice of a profession in the system of division of labor. So, professional orientation has triad structure a "factor – function - activity", the form of the manifestation of which is "the personal need for labor - the public (market) needs for labor - the choice of profession". In other words, professional orientation be an individually informed choice of profession, reflecting the resolution of the conflict between personal and public (market) needs in professional labor. It is a choice of a significant profession for employable individual based on a clear understanding of his needs, interests, personal properties and talents, and a public (market) need for work.

3. VOCATIONAL ORIENTATION OF STUDENTS IN HIGHER EDUCATION: CONTEMPORARY CONCEPT

Professional orientation in higher school - is an activity aimed at personal understanding of the students their self as a subject of professional careers within a certain educational program. Students of higher school as an object of university professional orientation are heterogeneous, they differ in the degree of personal comprehension of themselves as a subject of realization of the guaranteed right to free choice of educational program, i.e. coefficient of professional orientation. Coefficient of professional orientation of the student K_{pr} — this is an indicator of self-understanding of the individual in professional activity, reflecting the value-semantic vision of the professional community, in which it will be included in the future. Coefficient of professional orientation of the student determines the interest and focus of the student to form

their competitive advantage in the labor market, arrange a deep understanding and satisfaction of their needs and demands of a certain segment of the professional labor market. Coefficient of professional orientation of the able-bodied individual K_{pr} is functionally dependent on the personal component L i. e. depending on the maturity of professionally significant personal qualities, character traits; motivational component M - the presence of a predisposition to the reproduction of professional qualifications, awareness of its importance; activity component A - activity in overcoming emergent difficulties, the possibility of use experience in the changed educational and labor situations:

$$K_{pr} = f(L; M; A)$$

It should be noted that each student has a preferred component in its manifestation and development, which determines the ratio of the professional orientation (coefficient of the professional orientation). Depending on the value of the coefficient of professional orientation of the student, the value of it result can be divided into three types, each of which determines the dynamism (stability) and the strategy of choosing an educational program. This is the adaptive professional orientation $K_{pr} = f(L)$, adaptive social orientation $K_{pr} = f(M)$, and reproductive social-professional orientation $K_{pr} = f(A)$ (Table 1).

Table 1: Types of professional orientation of students depending on the consumer value of the educational program (in % to number of respondents)

Orientation to the needs of the labor market	Orientation on satisfaction of personal need for labor		
	low	medium	high
high	Professionally-adaptive 11,9 %	Subject-creative-professional 9,3%	Personality-productive 3 %
medium	Professional-reproductive 7,3 %	Personality-reproductive 9 %	Subject-creative-social 17,4 %
low	Subeducational 2,8 %	Social-reproductive 15,4 %	Social-adaptive 28,9 %

Comment: s

adaptive professional orientation;

adaptive social orientation;

reproductive social-professional orientation.

At the stage of the adaptive professional orientation are 28,5% of respondents. These students are dominated by idealistic ideas about the future profession, which are characterized by a relatively weak, unstable formedness and a strong moral normalization on the part immediate circle, especially the older generations. Their professional propensity is still unstable, based on the knowledge of minor properties of professional activity (such as: relative ease of professional activity, good comfortable working conditions, guarantee of permanent employment, life in the city, good salary, as well as opportunities of working in a women's staff, male staff, mixed staff, working without much effort, making a career, etc.). As a result, there are doubts about the correct choice of profession, the level of achievements, the future of the path of professional development, the extent of the efforts made, the degree of the efforts made, the prospects for continuation or change of activities, the strategies of action after the completion of the educational institution, etc. More than half of respondents (56,7 %) are in the adaptive social orientation phase on educational program. These respondents are characterized by an earlier

development of ambitious aspirations related to the desire to achieve an appropriate material and social status. The awareness of this group of respondents clearly expresses the fact that each profession has a well-defined social status that characterizes formal and informal recognition of its necessity, importance and popularity in the labor market. For them, the prestige of the profession is a reference point that sets the direction of the real choice of the educational program. The reproductive socio-professional guidance in the education program is provided by 14,8 % of respondents. These students are characterized by a well-formed own position with respect to method and means of self-realization in vocational and educational activities. They are characterized by the adoption of the personality raison of professional activity, which includes the development of regulatory mechanisms of activity, communication and creativity. As learning activities evolve and become more complex, the focus of students on future professional activities increases. The development of individual style of professional-educational activity and formation of responsibility for the process of achievement of personal goals without constant external influence takes place. Thus, each stage of a vocational orientation differs in its degree of criticality for purposes (satisfaction of personal or market needs in work) and attributes of vocational orientation (personal, motivational, activity), and hence from character and content of university vocational guidance.

4. IMPERATIVES OF STRATEGIC DESIGN OF PROFESSIONAL ORIENTATION AT A REGIONAL UNIVERSITY

Currently, most of the regional universities offer the same educational services, and if new popular and prestigious educational programs for young people and their parents appear on the market, they are immediately adapted by other market participants. Competitive advantage in attracting students through traditional means of promoting educational programs (press, television and radio advertising, outdoor advertising, printed and souvenir products, exhibitions and fairs of educational services, open doors days, scientific conferences and seminars, Internet advertising, university website and social networks communities it becomes difficult for universities. The modern economy presents each university with the need to achieve a sustained rate of income growth and to reduce the costs of the education program, i.e., vocational guidance makes sense for a higher school if it can generate an additional value. (Kong, Chrung, Song, 2012, pp. 10-11), i.e. leads to its capitalization.

Figure following on the next page

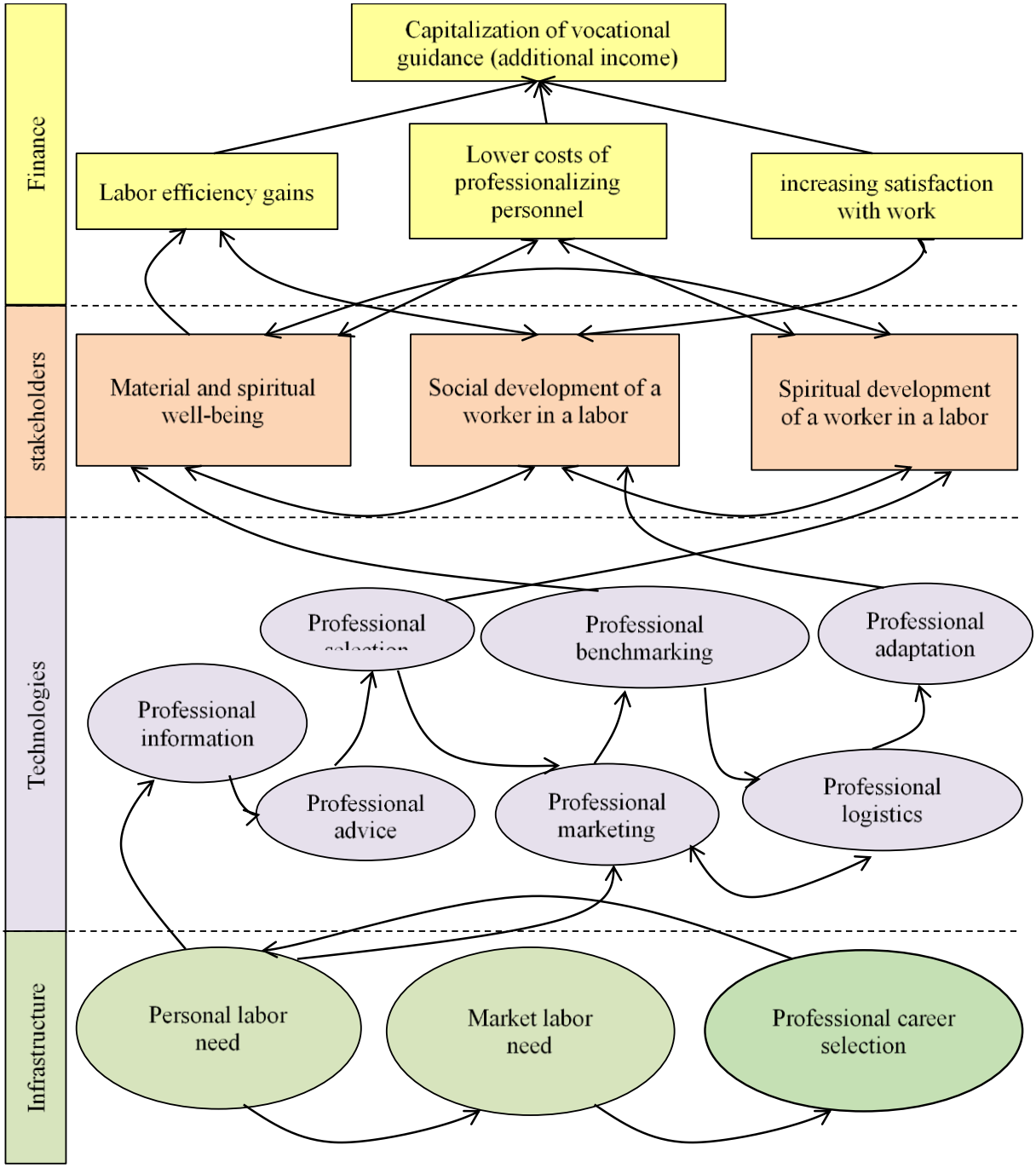

Figure 1: Graphical strategic design of professional orientation (developed by authors)

This is possible if the regional university can in a timely manner form students deep understanding of the consumer value of the educational program of higher education, considering personal and social (market) needs for professional labor. The consumer value of the educational program - these are the advantages for the professional positioning of students in the market system of division of labor, which arise in the process of forming competence of a certain level and volume in studying of the education program of higher education. Thus, the modern university professional orientation - it is a process of purposeful and organized acquisition of the university a holistic and sustainable skill to determine the needs of enrollee and students in a timely manner in the position of the labor market in order to satisfy them by

offering a certain educational program, exceeding the expectations of the labor market players, with maximum benefit. In other words, the economic purpose of professional orientation is not the profitability of the activity of the regional university and its share in the educational services market, but the consumer value of the educational program. It is precisely the proposal of the consumer value of professional orientation to the target group of labor market actors - this is the premise that intangible assets of professional orientation produce financially results (income). At that, there is no better (one and only right) impacts of vocational orientation with purpose to create the consumer value of the education program: the subject of the labor market, including the student, can achieve significant benefits due to varying technologies of professional orientation. Professional orientation as a targeted activity has an infinite number of decisions related to the formation of the consumer value of an educational program, where some solutions are more correct than others. The correctness of solution depends on the nested conceptual meaning. In this regard, the importance of building a strategic design of vocational orientation is growing. The strategic design of professional orientation - is the project planning of the capitalization of vocational orientation processes based on the system of equal interaction of labor market actors (Sotnikov, 2016, pp. 56-62) through regular and comprehensive monitoring and analysis of trends in consumer satisfaction and competitiveness of these actors. This design creates a causal set of professional orientation objectives and indicators for achieving these goals, initiatives, resources, time frames and liability, it allows us to understand how to achieve the strategic objectives of creating a stable system of views, beliefs, principles, qualities of employable people and their groups, which motivates them to choose a career (Sotnikov, 2015, pp. 126-135). This design clearly illustrates the focus and possibilities of focusing on such forward-looking directions of professional orientations as infrastructure, technology, steakholding and finance. (Figure 1).

5. CONSLUSION

Thus, the modern concept of university vocational orientation represents a general ideology of formation of the consumer value of the educational program, which is designed to prepare students constantly for the changing socio-economic reality. Professional orientation is intended to become a full-fledged regulator of lifelong learning (LLL) by increasing the socio-economic efficiency of informed choice of the educational program, of the professional future of employable person, in accordance with their needs in work, abilities, motives, preferences and the needs of labor market actors. The imperatives of the strategic design of professional orientation allow, first of all, to guarantee a professional approach to investing in professional orientation at the regional university, the choice of a way of self-realization of long-term competitive advantages of students in the labor market. Secondly, consolidate the vision of a strategic personal-professional position of a student in the labor market and create the basis for its competitiveness in the labor market. Third, create the conditions for the transition from "responsibility to choose a profession" to responsibility for a professional career.

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