INDUSTRIALIZATION AND WORK VALUES IN KEDAH, PENANG AND GREAT BRITAIN: A STUDY FROM THE CONVERGENCE-DIVERGENCE-CROSSVERGENCE PERSPECTIVE

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by

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worry, things take time" when I feel stagnated. My brothers, thanks for comforting me with your exaggerated compliments. I also wish to extend my gratitude to my friends who distracted me from my studies. Because of your distraction, the journey of my studies has become more colorful and memorable.

Faithfully,
Isaac
March 2021

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LIST OF ABBREVIATIONS

USM	Universiti Sains Malaysia
CDC	Convergence-Divergence-Corssvergence
GDP	Gross Domestic Product
GVA	Gross Value Added
PIO	Pioneer Industry Ordinance
II	Investment Incentives
FTZ	Free Trade Zone
PI	Promotion of Investment
APITD	Action Plan for Industrial Technology Development
KHTP	Kulim High-Tech Park
MNC	Multinational Corporation
KSTP	Kedah Science and Technology Park
FDI	Foreign Direct Investment
NCER	Northern Corridor Economic Region
GTC	George Town Conurbation
NPP	National Physical Plan
ISSP	International Social Survey Programme
PPS	Probability to Population Size
MCO	Movement Control Order
CMCO	Conditional Movement Control Order
SPSS	Statistical Package for the Social Sciences
BSA	British Social Attitudes
PAF	Postcode Address File

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INDUSTRIALISASI DAN NILAI KERJA DI KEDAH, PULAU PINANG DAN GREAT BRITAIN: SATU KAJIAN DARIPADA PERSPEKTIF CONVERGENCE-DIVERGENCE-CROSSVERGENCE

ABSTRAK

Kekurangan pengetahuan mengenai pengaruh industrialisasi terhadap nilai kerja dalam masyarakat Malaysia mencegah pemahaman yang lebih lanjut mengenai reaksi nilai rakyat Malaysia terhadap perubahan sosial peringkat makro. Ulasan kajian terdahulu menunjukkan bahawa dampak industrialisasi terhadap nilai kerja tidak konsisten dalam masyarakat yang beza. Kajian ini bertujuan untuk menentukan keadaan *Convergence-Divergence-Divergence* (CDC) nilai kerja dalam masyarakat Malaysia untuk mengetahui pengaruh industrialisasi terhadap nilai kerja rakyat Malaysia dan reaksi nilai rakyat Malaysia terhadap perubahan sosial peringkat makro. Dalam konteks kajian ini, nilai kerja dikonseptualisasikan ke dalam empat dimensi: Orientasi kerja ekstrinsik, orientasi kerja intrinsik, sentraliti kerja, dan keseimbangan kerja-kehidupan. Kerangka CDC telah digunakan untuk menguji hipotesis *convergence*, *divergence*, dan *crossvergence*. Kajian ini melibatkan 532 responden dari tiga kawasan dengan tahap industrialisasi yang berlainan. 175 responden Kedah dan 177 responden Pulau Pinang direkrut menggunakan pensampelan mudah melalui servei tatap muka dan servei dalam talian, sementara 180 responden Great Britain diperolehi daripada data sekunder. Ujian Mann-Whitney U dan Uji Kruskal-Wallis H digunakan untuk menganalisis respons yang dikumpul. Keputusan kajian ini menyokong hipotesis *crossvergence*. Dua daripada empat dimensi nilai kerja di Pulau Pinang tidak mempunyai perbezaan yang signifikan dengan nilai kerja di Kedah, dan tiga dari empat dimensi nilai kerja di Pulau Pinang tidak mempunyai perbezaan yang signifikan dengan nilai kerja di Britain. Kesimpulannya, keputusan menunjukkan *crossvergence* nilai kerja dalam masyarakat Malaysia. Tahap industrialisasi berpengaruh pada beberapa dimensi nilai kerja sementara sebahagian dimensi nilai kerja tidak dipengaruhi. Keputusan ini menunjukkan

bahawa masyarakat Malaysia berada di tengah-tengah antara adaptif dan resister ketika mengalami perubahan sosial peringkat makro.

INDUSTRIALIZATION AND WORK VALUES IN KEDAH, PENANG AND GREAT BRITAIN: A STUDY FROM THE CONVERGENCE-DIVERGENCE-CROSSVERGENCE PERSPECTIVE

ABSTRACT

The lack of discovery of the influence of industrialization on work values in Malaysian societies deters the further understanding of the reaction of Malaysians' values to macro-level social changes. The review of prior studies shows that the influence of industrialization on work values is not consistent across societies, suggesting that it depends on the kind of society. This study aims to determine the Convergence-Divergence-Divergence (CDC) condition of work values in Malaysian societies to learn more about the influence of industrialization on Malaysians' work values and the reaction of Malaysians' values to macro-level social changes. In this context, work values are conceptualized into four dimensions: extrinsic work orientation, intrinsic work orientation, work centrality, and work-life balance. To test the convergence, divergence, and crossvergence hypotheses, the CDC framework was employed. 532 respondents from three regions with different extents of industrialization were involved. 175 Kedah respondents and 177 Penang respondents were recruited using convenience sampling through a face-to-face survey and an online survey, while 180 Great Britain respondents were obtained from secondary data. The responses were analyzed using the Mann-Whitney U Test and Kruskal-Wallis H Test. The results support the crossvergence hypothesis. Two out of four dimensions of work values in Penang do not differ significantly from that in Kedah and three out of four dimensions of work values in Penang do not differ significantly from that in Great Britain. This study suggests a verdict of crossvergence in work values in Malaysian societies. The extent of industrialization is influential on some dimensions of work values while some are not influenced. This implies that Malaysian societies are somewhere in the middle between adaptive and resistant when dealing with macro-level social changes.

CHAPTER 1

INTRODUCTION

1.1   Background

Industrialization is defined as the socioeconomic transition from an agrarian society into an industrial society involving manufacturing as the main mean of production to restructure the economy (O'Sullivan & Sheffrin, 2003). It is believed to be one of the most influential social events in recent centuries (Marx & Engels, 1977; Smith, 1811). Because of its macro scale and complexity, industrialization is often confused with other social events such as urbanization, modernization, and globalization. Hence, Blumer (1990) argues that in examining the influences of industrialization, the first thing to do is to identify the characteristics of industrialization. The characteristics of industrialization include the nucleus of mechanical production, an attached network of procurement and distribution, and attendant service structure (ibid.). Without these characteristics, a society cannot be considered as undergoing the process of industrialization. The social changes caused mainly by the characteristics of industrialization can hence be identified as the effect of industrialization.

If the characteristics of industrialization are the causes, will the effects be similar in every industrial society? Kerr et al. (1969) believe that similar effects will happen in every industrial society and these effects are the change of workforce structure, a larger scale of society, and the emergence of consensus in society. The change of workforce structure is caused by the creation of new occupations during industrialization. The larger scale of society is caused by the more intensive managerial and administrative requirements of industrialization. The emergence of consensus is caused by the common values that are beneficial to industrialization such as high valuation to science, technology, modernity, and education. In short, a society undergoing industrialization will result in a similar

environment and this environment will produce a similar set of effects. All these effects will initiate similar changes and eventually influence the individual values in society.

Among the individual values, work values are believed to be one of the values most influenced by industrialization. The influence of industrialization on work values can be explicitly observed in the workforce structure, average educational attainment, and average income. With the changes in the workforce structure, average educational attainment, and average income, different types of needs will emerge in the industrialized society. For example, working in an industrial occupation, spending more time in school to get a better job, and growing in a wealthier environment, could develop different types of needs when compared to the circumstances in an agricultural society. The development of different types of needs leads to the change of individual work values during industrialization. Therefore, some authors even argued that industrialization is the most influential social institution on individual work values (Parboteeah & Cullen, 2003).

As a newly industrialized country, Malaysia is no exception in experiencing the changes brought by industrialization. The change of workforce structure (Abdul Rahman, 1996), the increase of average educational attainment (Abdullah, 1998), and the increase of average income (Rasiah et al., 2015) were found evident during the process of Malaysian industrialization. The considerable shift of the labor force from the agriculture sector to the manufacturing sector in the period of 1970 to 2000 (Malaysia, 1999) indicated the change of workforce structure during industrialization. The emergence of higher-class occupations in the manufacturing sector spurred the demand for workers with higher educational attainment (Abdullah, 1998) and led to a significant increase in the enrolment of tertiary education in Malaysia (Young & Ng, 1992). Almost in the same period, the average income in Malaysia grew substantially (Malaysia, 1996; Rasiah et al., 2015). If the changes caused by industrialization occur in Malaysia in a similar manner, will the work values in Malaysia converge and become similar to that of the early industrialized countries?

1.2   Research Problem

Previous research on Malaysian industrialization focused mainly on the increasing number of manufacturing factories (Rasiah, 1995b), expansion of middle class (Abdul Rahman, 1996), change of women's role in the society (Jamilah, 1982; Stivens, 1998; Subramaniam & Selvaratnam, 2010), change in the patterns of family structure (Stivens, 1987; Tey, 2007), urbanization (Abdul Rahman, 1996), change of human resource policy (Kuruvilla, 1996), increase of income per capita (Henderson, 2005), an increasing number of immigrant labors (Abdullah, 1998), the ideological struggle of identity (Chong, 2005; Thompson, 2003), modernization (Lee, 1992), and changes in lifestyle (Abdul Rahman, 2002). The effects of industrialization that are influential to individual work values including the change of workforce structure, an increase of average educational attainment, and increase of average income, are also found evident during Malaysian industrialization (Abdul Rahman, 1996; Abdullah, 1998; Rasiah et al., 2015). However, little is known about how Malaysians' work values change upon industrialization. The lack of discovery in this research area forms a knowledge gap not only concern the influence of industrialization on Malaysians' work values but also in the understanding of how Malaysian societies react to macro-level social change.

In addition, even though there are studies on the relationship between industrialization and individual work values (Bellavia & Frone, 2005; Byron, 2005; Kalleberg & Marsden, 2013; Kashefi, 2005; Lobel, 2013; Mannheim, 1993; Parboteeah & Cullen, 2003), the consistency of the relationship is still under criticism. Some authors do not agree that industrialization is influential on individual values, they argue that the values in a society are mainly shaped by sociocultural influence (Hofstede, 2001; Ricks et al., 1990). The debate among different schools of thought and contradicting results by different studies (e.g. Bellavia & Frone, 2005; Fagan, 2003) have caused the relationship between industrialization and individual work values to be inconclusive.

The debate of whether industrialization is influential on work values can be seen as an extension of the convergence-divergence debate. Convergence and divergence theories have been opposing to each other for almost 200 years (Baum, 1974). Convergence theory sees technological influence as the main factor which will shape the values of industrializing societies and cause similarities among societies (Form, 1979), whereas divergence theory sees sociocultural influence as the main factor which will sustain extant values and cause distinct differences among societies even when the societies are undergoing industrialization (Ralston, 2008). In hoping to resolve the debate, Ralston et al. (1993) propose the Convergence-Divergence-Crossvergence (CDC) framework. With the addition of the crossvergence perspective, the CDC framework serves as a tool to examine which influence is more dominant in influencing the values in a society; the technological influence, sociocultural influence, or the combination of both. The CDC framework was found to be applicable in achieving its objective in previous studies (see Priem et al., 2000; Ralston et al., 1997; Vertinsky et al., 1990). However, there are only a few studies that applied the CDC framework in Malaysia (Liu, 2012; Pearson & Entrekin, 1998). Hence, there is still significant room for discovery in terms of the applicability of the CDC framework in Malaysia.

In short, a study using the CDC framework in finding the influence of industrialization on work values in Malaysia is needed to tackle the problems mentioned including the knowledge gap of the influence of industrialization on work values in Malaysia, the inconclusive relationship between industrialization and work values, and the indefinite applicability of the CDC framework in Malaysia.

1.3   Problem Statement

As a late-industrialized society, Malaysian society always has the optionality of deciding which model or which society (western, eastern, or neither) to reference while dealing with the direction of development, including the development in work-related

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contexts. The studies of convergence, divergence, and crossvergence of work values in society are important resources in deciding the direction of developments in work-related contexts especially for multinational corporations (Ralston et al., 1997). However, the lack of discovery in convergence, divergence, and crossvergence of work values in Malaysian society increases the uncertainty in deciding the direction of related developments. Hence, a comparative study using the CDC framework is needed to examine the trend of work values change upon industrialization in Malaysian societies and determine whether Malaysians' work values are converging (adaptive), diverging (resistant), or crossverging (adaptive to some while resistant to others), so that sophisticated decisions can be made in the planning of future developments in work-related contexts.

1.4   Theoretical Framework and Study Locations

Since the research objective and research hypotheses in this study will be mainly constructed under the Convergence-Divergence-Crossvergence (CDC) framework and specific study locations are required to be included in the research objective and research hypotheses, it is necessary to briefly present the framework and the study locations before proceeding to the following sections. The CDC framework is principally a comparative framework that consists of two theories and one perspective namely convergence theory, divergence theory, and crossvergence perspective. Convergence theory states that industrialization will cause the values in industrializing societies to converge; divergence theory states that the values will be influenced by sociocultural influence to diverge even though the society is industrializing; and crossvergence perspective states that both industrialization and national culture will influence the values simultaneously and create a unique value system.

The purpose of the framework is to determine whether a subject being studied is converging, diverging, or crossverging through multiple comparisons among groups with different characteristics. In the current study, the subject being studied is work values and the

characteristics are the extent of industrialization and sociocultural influence. Work values are compared among the groups to obtain the CDC result and the result is interpreted accordingly. In the current study, a three-group model of multiple comparisons was used. The criteria of the three groups required in the framework are stated as below.

Group A   : With the relatively lowest extent of industrialization and socio-culturally similar to group B

Group B   : With a relatively higher extent of industrialization than group A and socio-culturally similar to group A

Group C   : With the relatively highest extent of industrialization and socio-culturally different from group A and group B

Group A and Group C are the reference groups in the comparisons. Group A represents the low extent of industrialization and similarity in socio-culture. Group C represents the high extent of industrialization and difference in socio-culture. In the comparisons if the work values of group B are similar to that of group C and different from that of group A, it implies that the work values of group B are in convergence; if the work values of group B are similar to that of group A and different from group C, it implies that the work values of group B are in divergence; if some of the work values of group B are similar to that of group A while other work values are similar to that of group C, it implies that the work values of group B are in crossvergence.

Convergence   : All work values → Group A ≠ (Group B = Group C)

Divergence   : All work values → (Group A = Group B) ≠ Group C

Crossvergence : Some work values → Group A ≠ (Group B = Group C);

                 some work values → (Group A = Group B) ≠ Group C

*=: similar; ≠: different

Given that different criteria are required for the three groups, multiple study locations are required to perform the comparisons. Among the states in Malaysia, Kedah and Penang are suitable to be selected as the study locations for comparison because of the similarities in socio-cultural aspects and difference in the extents of industrialization. The similarities in socio-cultural aspects between Kedah and Penang can be traced back to the pre-independence period of Malaysia and some connections are still evident today including the economic, social, and political connections. The difference in the extent of industrialization between Kedah and Penang can be observed by comparing the shares of the manufacturing sector in GDP, shares of the labor force involved in the manufacturing sector, and incomes per capita. The details of this topic will be presented in later sections, specifically section 2.8 and section 3.4.

Great Britain is selected as the early industrialized society for comparison because of its high extent of industrialization and suitability as a "benchmark" of convergence. In terms of the extent of industrialization, Great Britain is one of the top ten countries that have the highest industrial output in the world in 2015 (World Bank, 2015). Among those countries, Great Britain is the only western country that has structural similarities with Malaysia because of the colonization process, making it a good "benchmark" of convergence in the comparison with Malaysian states. Although comparing Great Britain to the Malaysian States might affect the comparability due to the difference in the level of analysis, it should have a minimal effect in this study as the type of comparison used is implicit comparison. Another element supporting this statement is the interrelation among the emphasis of the research objective, the determining factor, and the definition of study location in the current study. The details of this topic will be further discussed in later sections, specifically section 2.8 and section 3.4.

1.5 Research Objective

To address the problem stated, this study aims at finding out whether there is a significant difference in work values in Malaysian societies with different extents of industrialization. In addition, this study also aims to determine the Convergence-Divergence-Crossvergence condition of work values in Malaysian society by comparing it with Great Britain in the CDC framework. The specific research objectives of this study are stated as below:

- To compare the trends of work values in Kedah and Penang.

- To compare the influence of industrialization on work values among Kedah, Penang, and Great Britain.

- To determine whether the work values of Malaysian society are converging, diverging or crossverging upon industrialization.

1.6 Research Hypotheses

To achieve the research objectives, the hypotheses are formulated based on the literature review. The hypotheses might be confusing at first sight because multiple comparisons are involved (see section 2.9 for the justifications of the formulation). The alternative hypothesis was used to study the influence of industrialization on work values in Malaysian societies. The convergence, divergence and crossvergence hypotheses are used to determine whether Malaysian society is converging, diverging or crossverging upon industrialization. Because of the complexity of convergence, divergence and crossvergence conditions, it requires more than one hypothesis to test which condition Malaysian society is currently in. Hence, it will be clearer to categorize the multiple hypotheses into convergence hypothesis, divergence hypothesis and crossvergence hypothesis.

- Alternative Hypothesis: There are statistically significant differences in all the dimensions of work values among Kedah, Penang, and Great Britain.

- Convergence Hypothesis:
    i)   There are statistically significant differences in all the dimensions of work values between Kedah and Penang.

    ii) There is no statistically significant difference in all the dimensions of work values between Penang and Great Britain.

- Divergence Hypothesis:
    i)   There is no statistically significant difference in all the dimensions of work values between Kedah and Penang.

    ii) There are statistically significant differences in all the dimensions of work values between Penang and Great Britain.

- Crossvergence Hypothesis:
    i)   Some dimensions of work values in Penang are not statistically different from Kedah and the other dimensions are not statistically different from Great Britain.

The hypotheses about convergence, divergence and crossvergence can be unavoidably confusing at first sight. To ease understanding, the following sentences present the hypotheses in a more direct but statistically less accurate way. If the work values in Penang are similar to Great Britain and different from Kedah, work values in Penang are converging; If the work values in Penang are similar to Kedah and different from Great Britain, work values in Penang are diverging; If some dimensions of work values in Penang are similar to Kedah and the other dimensions are similar to Great Britain, work values in Penang are crossverging. The reason for using Penang as the focus region will be discussed in section 2.8. The definition of the key terms in the hypotheses is explained below.

1.7   Definitions of Key Terms

Industrialization = The socioeconomic transition from an agrarian society into an industrial society involving manufacturing as the main mean of production to restructure the economy (O'Sullivan & Sheffrin, 2003). In this study, the extent of industrialization was

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measured as the Gross Domestic Product (GDP) generated by the industrial sector divided by total Gross Domestic Product (GDP) generated (Deng et al., 2008).

Work Values = Goals one seeks to attain to satisfy needs by working or occupation (Super, 1973). In the current study, work values were conceptualized and measured by three dimensions that represent different needs. These three dimensions are: 1) *work orientation* that represents the expectation of work outcomes to satisfy intrinsic and extrinsic needs (intrinsic and extrinsic work orientations are measured separately); 2) *work centrality* that represents how much one needs work in his or her life; 3) *work-life balance* that represents how balanced one achieves on fulfilling the needs at work and at home.

Work orientation was measured as the importance of different outcomes in a job, rated by the respondents with five-point Likert scales. The higher the importance given, the higher the work orientation. *Work centrality* was measured as the association between work and money, rated by the respondents with five-point Likert scales. The lower the association between work and money, the higher the work centrality. *Work-life balance* was measured as the level of satisfaction at work minus the level of role conflict between work and home. The higher the outcome, the higher the work-life balance. The levels are rated by the respondents with Likert scales.

Convergence-Divergence-Crossvergence (CDC) Framework = A framework that studies the change of value in a society by combining the convergence theory, divergence theory, and crossvergence perspective (Ralston et al., 1997). By multiple comparisons among different study locations, this framework can determine whether work values in a study location are converging, diverging, or crossverging.

Convergence Theory states that individual values in every society will be influenced by industrialization and eventually become similar (Kerr et al, 1996). It also argues that values in the future of third world countries will appear very similar to western industrialism (Bell, 1976; Kumar, 1978). The results of this study will be considered supporting the convergence theory if all dimensions of work values in Penang converge to the work values in Great Britain.

Divergence Theory = Individual values in every society will be different because of the differences in sociocultural influences, even the society is industrialized (Ricks et al., 1990). Proponents of divergence theory argued that the distinctive culture in every country will result in different individuals' values. The results of this study will be considered supporting the divergence theory if all dimensions of work values in Penang diverge from the work values in Great Britain.

Crossvergence Perspective = The values of society are shaped by both industrialization and sociocultural influences and a unique values system that integrates both influences will be formed (Ralston et al., 1993). The results of this study will be considered supporting the crossvergence theory if some dimensions of work values in Penang converge to the work values in Great Britain and some dimensions of work values in Penang diverge from the work values in Great Britain.

These key terms are elaborated further respectively in sections 2.2, 2.4, and 2.6.

1.8   The Scope of Study

The Malaysian societies selected in this research are Kedah and Penang. The target population is adults aged 18 and above in Kedah and Penang. A survey using convenience sampling was conducted to collect the data of work values represented by work orientation, work centrality, and work-life balance. The data collection started in February 2020 and was completed in June 2020. The data collected were analyzed using Mann-Whitney U Test and Kruskal-Wallis H Test to perform multiple comparisons to test the hypotheses including comparisons between two groups and comparison among three groups.

1.9   Research Significance

The viability of learning about the influence of industrialization on individual work values at the moment might be questioned as Malaysian industrialization had started almost fifty years ago. However, industrialization is not a process that will have an immediate effect

on individual work values. It gradually changes the social environment including the workforce structure, educational requirement, average income, and all these changes contribute to the influence on individual work values. The process of value change might take "ten years, twenty years, or perhaps generations" (Ralston et al., 1997, p. 183). The following paragraphs present the significance of the current study.

Firstly, the findings in this study will contribute to the literature in three aspects: 1) filling the knowledge gap of the influence of industrialization on work values in Malaysia; 2) contributing more empirical results to interpret the inconclusive relationship between industrialization and work values; 3) examining the applicability of the CDC framework in Malaysian society.

Moreover, since the current study will investigate the influence of industrialization on work values in Malaysian societies, it can show how Malaysian societies react to macro-level social change. Knowing the trend of individual work values change during such social changes is essential for the planning of future development in work-related contexts. What happened in the past provides meaningful insights about how individuals behave in a society and it helps the social researchers in predicting what lay ahead because — the past causes the present, and so the future (Stearns, 1998). In other words, knowing how Malaysians react to the effects of industrialization, adapting the "industrial" values and become similar to those in early industrialized societies, or resisting the "industrial" values and form a distinctive set of values, is important in predicting the reaction of Malaysians to other coming macro-level social changes like the industrial revolution 4.0.

The understanding of how Malaysians' work values change upon social change is also crucial for improvement in human resource management and social development. In terms of human resource management, the understanding of Malaysians' work values change helps in cultivating a suitable organizational culture that meets the expectations and values of Malaysian employees. The cultivation of a suitable organizational culture is essential,

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especially for multinational corporations that contain employees from different cultures. If Malaysians' work values are more adaptive, i.e., convergent, the corporations can introduce a similar organizational culture that had been practiced and proven effective in other industrialized societies. On the contrary, if Malaysians' work values are more resistant, i.e., divergent, the corporations need to make adequate changes to localize the organizational culture. In deciding whether to look east, west or at ourselves, it is certainly worthwhile to know more about the reaction of our society to social changes. Have Malaysians' work values changed upon industrialization? Are the corporations in Malaysia still offering the same job rewards as in the past that does not meet the neoteric employees' expectations? After all, a suitable organizational culture plays an important role in maintaining employees' satisfaction, morale, engagement, and retention rate.

In terms of social development, the understanding of Malaysians' work values change helps in finding out the conditions of contemporary Malaysians' ideal work. Work is one of the key components in one's life for most individuals, especially in the modern era in which more and more families are having a dual-income model (Quast, 2011; Zaimah et al., 2013). If the majority of individuals can enhance their well-being by obtaining satisfaction and a sense of accomplishment from work, it will definitely be a great step of improvement in terms of social development.

1.10   Organization of Thesis

This thesis is organized as follows. Chapter 2 presents the literature review encompassing the constructs used in this study including industrialization and work values. The studies regarding the relationship between industrialization and work values were also reviewed. To form robust hypotheses, this chapter reviews the theories and framework that aim to explain and anticipate the relationship between the constructs. This chapter ends with a discussion of previous studies on relevant topics and research gaps in the context of Malaysia.

Chapter 3 elaborates on the justifications of methodological decisions including the selection of study locations, instrument, population, sampling method, and statistical tests. The details of data collection are included such as the recruitment of samples, length of the survey, and method of participation.

Chapter 4 shows the key results of this study. The results of exploratory analysis including the descriptive analysis of demographic and dependent variables, the normality and homogeneity of variances of data are presented to demonstrate the nature of data collected. This chapter reveals the results of the comparisons of the dependent variable among groups in testing the hypotheses. The significance values and effect sizes of the comparisons are presented.

Lastly, Chapter 5 presents the implications of findings, limitations and future recommendations, and the conclusion of the current study. The implications are discussed encompassing the findings of work values in Kedah and Penang and the comparisons of work values among Kedah, Penang, and Great Britain. This chapter also presents the limitations of the current study and suggestions for future studies. At the end of this chapter, the findings, implications, and contributions of the current study are presented.

CHAPTER 2

LITERATURE REVIEW

2.1   Introduction

The current study stands to study the influence of industrialization on work values in Malaysian societies. In reviewing the literature regarding the topic, this chapter is organized thematically and can be categorized into three major parts: 1) The discussion of the relevant characteristics of industrialization and what are influenced in terms of work and work values. 2) The discussion of the theories and framework that can be employed to study the influence of industrialization on work values. 3) The discussion of the relevant studies in Malaysia including Malaysian industrialization, Malaysians' work values, and the application of the aforementioned framework in Malaysia. For clearer presentation, the first part is divided into four sections: Section 2.2 presents the characteristics and effects of industrialization; section 2.3 presents the influences of industrialization on work; section 2.4 presents the conceptualization of work values; section 2.5 presents the relationship between industrialization and work values. The second part is covered in section 2.6, the Convergence-Divergence-Crossvergence (CDC) framework is discussed. Lastly, the third part is covered in sections 2.7 and 2.8, this part discusses the background of industrialization, work values in Malaysia, and the studies regarding the application of the CDC framework in Malaysia. At the end of this chapter, the formulation of hypotheses for the current study is presented.

2.2   The Characteristics of Industrialization and Social Changes

Industrialization is defined as the socioeconomic transition from an agrarian society into an industrial society involving manufacturing as the main means of production to restructure the economy (O'Sullivan & Sheffrin, 2003). Many authors including those in the far past had agreed to the proposition that industrialization is one of the most important events in the development of society (Marx & Engels, 1977; Smith, 1811). Most researchers also agree that industrialization is substantially influential as an agent for social change (Priem et

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al., 2000). Although industrialization is always studied as an agent of social change, its definition is sometimes too general that disagreements among researchers exist in interpreting its influence on society. The extent of what can be considered as the effects of industrialization varies across studies. This had caused inconsistencies in the literature. Industrialization is a very complex macro-level social change, if the definition is not clear and accurate, it can easily be confused with other macro social changes like urbanization, modernization and globalization. For this reason, Blumer (1990) argues that, to determine whether a social change is caused by industrialization, one needs to look into the characteristics of industrialization, or the natures of industrialization in Blumer's writing. Only when the social change is caused by the characteristics of industrialization, it can be considered as the effect of industrialization.

Blumer (1990) proposes the characteristics of industrialization that will lead to significant social changes are nucleus of mechanical production, attached network of procurement and distribution, and attendant service structure. Following Blumer (ibid.) this trio is inevitable and indispensable characteristics of industrialization. A nucleus of mechanical production is an area where economic goods are produced by power-driven machines. The nucleus can be in the form of factory, mill, or industrial enterprise. In development studies, a nucleus of mechanical production is also referred as industrial clustering. As one of the pioneer works in the study area, Marshall (1920) states that the clustering of similar enterprises could lead to lower production cost because it provides available specialized workforce, access to suppliers of specific services and the efficient dissemination of latest knowledge. Multinational studies showed that industrial clusters are common in a variety of countries (Nadvi & Schmitz, 1994). Especially for the countries at the early stage of industrialization, developing an industrial cluster or nucleus of mechanization is significant for industrial growth (Schmitz & Nadvi, 1999). Although the growth rates of industrial clusters differ in different circumstances (McCormick, 1998; Nadvi, 1999; Rabellotti, 2016), the emerging of nucleus of mechanization in every industrialization is

certain. Thus, it is logical to consider nucleus of mechanization as an inevitable characteristic of industrialization.

Another characteristic of industrialization, the attached network of procurement and distribution is always associated with nucleus of mechanization. To consistently manufacture economic goods, a network of procurement is needed to supply the raw materials. Likewise, to deliver the manufactured to the market, a network of distribution is needed to convey the finished goods. Procurement and distribution services are essential before and after the manufacturing process. For manufacturing to function, substantial development in the service sector is a prerequisite (Baer & Hervé, 1966). The inevitability of service sector development can be observed through the indirect and induced effects of industrialization on employment creation (Lavopa & Szirmai, 2012). By studying the intersectoral relationship between manufacturing and services in 26 countries, Park and Chan (1989) found that the employment of the service sector significantly depends on the employment of the manufacturing sector as a source of inputs. Worth mentioning, the relationship is asymmetrical dependent that the service sector depends on the manufacturing sector to a much greater extent than vice versa. Studies across countries showed that the development in the manufacturing sector has a significant positive impact on employment creation, yielding a multiplier effect (indirect jobs per every direct industrial job created) of 3 in the United States (Baker & Lee, 1993), 5.1 in African countries (Abdo, 2011), and 25 in India (Kumar & Iverson, 2011). Most of the indirect effects are contributed by sales and distribution (Abdo, 2011; Kumar & Iverson, 2011). It is evident that the development of the attached network of procurement and distribution always coexists with the presence of a nucleus of mechanization, hence it is another inevitable characteristic of industrialization.

In addition, the nucleus and the attached network will only function when the attendant service structure is established. The attendant service structure includes banking, credit, and financial services. The attendant service structure is necessary for industrialization because industrial technology is capital-intensive (Sutcliffe, 1971). Most capital-intensive

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technology can reduce the production cost per unit, so it is highly valued in industrialization (Kiely, 1998). Some authors claimed that the first industrialization in England was significantly facilitated by its financial service structure (Bagehot, 1873; Hicks, 1969). The attendant service structure is essential in facilitating the flow of capital. Previous studies showed the attendant service structure is crucial in the process of industrialization (Levine, 1999). Comparative studies also found a positive relationship between financial development and industrial growth, and financial development is the cause (Haber, 1991; 1994). Hence, to industrialize, the attendant service structure cannot be absent.

Blumer stated, by identifying these characteristics, social changes led by industrialization can be accurately recognized. If the characteristics of industrialization are the causes, will the effects be similar in every industrial society? Kerr et al. (1969, p. 15) believe similar effects will happen in every industrial society and they called these effects as the "universals" of industrialization. The effects of industrialization proposed by Kerr et al. (ibid.) are the change of workforce structure, larger scale of society, and the emergence of consensus in society.

In an industrial society, the workforce structure will be more stratified because many different types of occupations are needed by the characteristics of industrialization. For example, technicians are needed by the nucleus of mechanical production, logisticians are needed for procurement and distribution, and financial professionals are needed by the attendant service structure. In the supply of the workforce, industrialization changes the purpose of family and education. In industrial society, the children no longer learn everything from the family and most of them are expected to have different kind of occupation from their parents. It happens mainly because of the shift of the mean of production from predominantly agriculture to manufacturing. More workers choose to work in the manufacturing sector as the factories provide more stable jobs and higher pay than working in agriculture. In order to smoothen the shift of the workforce, a formal educational system is also imperative to train the required industrial workforce. Therefore, there will be a formation of different classes in

the workforce, stratified by education and occupation. Previous studies and findings of this topic will be further discussed in the following section on industrialization and work.

The scale of industrial society is much larger than an agricultural society because the technology and specialization of industrialization are always associated with large-scale organization that can handle more intensive managerial and administrative requirements. When there are large-scale organizations, the industrial system will create an elaborate "government" to form the web of rules in order to govern the industry (ibid, p. 24). Different cultures might formulate and promulgate the rules differently, however Kerr et al. proposed that the content of the rules will certainly involve professionalism, internationalization, and globalization. These rules inevitably shape social values, which Kerr et al. (ibid.) name them "consensus". All industrial societies have common values, such as high valuation to science and technology, modernity, and education because these values serve industrial growth and are beneficial in an industrial society. These consensuses are applicable in many aspects of society, thus causing numerous changes in the structure. The emergence of consensus or common values can be validated through studies on the change of value before and after industrialization in a society.

To sum up, previous studies showed that the three characteristics of industrialization are evident in most industrial societies. These characteristics result in the changes in workforce structure, the scale of society and, consensus in society. Looking at the effects of industrial development, numerous aspects of society are altered by industrialization including the mean of production, economy, social values, governance, workforce structure, human resource management and education. Many of these aspects are associated with work. Therefore, in the literature, a lot of attention had been given to the relationship between industrialization and work.

2.3   The Influences of Industrialization on Work

Work is closely related to industrialization because the characteristics and effects of industrialization influence the means of production in society. Some influences were discussed briefly in the above section such as workforce structure. This section focuses on the influence of industrialization on work. Three aspects that relate closely to work are found in past literature to have significant changes before and after industrialization. These aspects are workforce structure, educational attainment, and income.

2.3.1   The Change of Workforce Structure: New Occupations and Job Stratification

The workforce structure has been drastically changed by industrialization. Before industrialization, a pair of shoes could be entirely made by only one shoemaker. After industrialization, shoes are made in a production line facilitated by machines in order to be more efficient. The process of making shoes is separated into multiple tasks: design, operation and maintenance of machine and procurement of material and distribution of product, just to name a few. Consequently, division of labor occurs in production and new occupations are created. The task assigned to each worker is more specified and specialized. Other than in production, industrialization also creates many new occupations in the market (Blumer, 1990) as mentioned in the previous section of changes of workforce structure. During industrialization, the change of workforce structure can be explained by three factors: 1) increased productivity of labor, 2) technological advancement and 3) increased scale of economic activity (Treiman, 1970).

Firstly, the increased productivity of labor changes the demand of the labor market. Productivity is increased by the mechanization of production. With the mechanization of production, less labor is required in the agriculture sector and manufacturing production is more efficient with the machines (Jaffe & Stewart, 1951). In a previous statistic involving 96 countries, when a country industrializes, the share of the labor force in agriculture decreases

(Ginsburg, 1961, p. 34). As such, the less demand for labor in agriculture results in more labor shift from the production of goods to the provision of service (Kuznets, 1957). Thus, the increased productivity of labor will result in the consequence that less labor is required in the agriculture sector and therefore allowing more labor to engage in manufacturing and service sectors.

Secondly, new occupations will be created when technology advances during industrialization (Treiman, 1970). Technological advancement is imperative to kick start industrialization. As mentioned in the paragraph above, the mechanization of production plays a major role in increasing productivity and the mechanization of production is only feasible when the technology in society reaches a certain level. Be it to design, operate or maintain the machine, many new occupations are created (Jaffe & Stewart, 1951). Eventually, the increased productivity and diversity of occupation facilitated by technological advancement will lead to an increase in the scale of economic activity.

Lastly, the increase in the scale of economic activity will create more occupations by urging the development of the production and marketing system. The scale of economic activity increases because of the raising capital requirement due to the involvement of machines and increased productivity of labor. These two causes are connected. The capital requirement increases because of the need to increase productivity. After all, this leads to the demand for a bigger market to sell the products. In order to sell more products, the size of an enterprise has to be increased. Hoselitz (1961) found out that the average size of the enterprise in all industries except printing, increased consistently during German industrialization. Treiman (1970) argues the average size of enterprise increases mainly because of the development of complex production and marketing system. Such development will initiate the need for clerical and administrative personnel. Hence, the creation of new occupations during industrialization is not only in the secondary sector, but also in tertiary sector.

The influence of industrialization on workforce structure is remarkable. It changes the labor force in all three primary, secondary, and tertiary sectors. Many occupations created by industrialization are also becoming highly specialized. Therefore, higher educational attainment is also required to match these occupations. The next section discusses the relationship between industrialization and education and how this relationship affects work.

2.3.2   Educational Attainment

Some scholars argued, another concomitant of industrialization is the rise of average educational attainment (Bowman & Anderson, 1963). Countries that have completed the shift of labor force from agriculture to manufacturing tend to have a better educational system (Federman, 2005). One of the major standpoints of this statement is that industrialization creates a requirement for workers with better education, in terms of occupational knowledge and skills.

Bantock (1963) believes mass education is a by-product of industrialization. This is because workers with literacy and numeracy skills are highly required in industrial workplaces to operate the machines. In addition, mass education is made possible with the economic surplus brought by industrial growth in many countries (Carl, 2009).

Nevertheless, the question of whether industrialization increases average educational attainment is still debatable. The main reason is that the relationship between industrialization and education is ambiguous (Basakha & Hossein, 2019). For instance, a study done in Indonesia presented that industrialization has a positive effect on all levels of education (Federman & Levine, 2005) whereas in the United States, manufacturing employment was found to have a negative effect on secondary education (Goldin & Katz, 1999). Even in the same country, results obtained showed considerable controversy (Atkin, 2016; Le Brun et al., 2011). In Mexico, Atkin (2016) found out that the higher the manufacturing job arrival rate, the higher the secondary student dropout rate; whereas Le Brun et al., (2011) observed a

positive relationship between industrialization and primary education. The significant difference between these two results is the level of education. The insight that can be drawn from these studies is when a country industrializes, there will be a positive effect on its primary education but a negative effect on its secondary education. It is just a hypothetical statement, yet it does provide a perspective to understand the relationship. A key question is, why does industrialization have a negative effect on secondary education in some industrializing countries?

To answer the question above, the extent of industrialization is not the only variable, the type of industrialization also plays an important role, whether it is low-skilled, middle-skilled or high-skilled. Coxhead and Shrestha (2017) found out that in Vietnam, the probability of teenagers stop schooling after secondary school is positively related to the intensity of foreign-invested firms. According to the study, foreign-invested firms are much less skill-intensive than state-owned firms in Vietnam. This implies that low-skilled industrialization will stop teenagers from further studies because additional years of schooling will not bring any advantage in their career path. Thus, if only low-skilled workers are required in the industrializing region, local teenagers are more likely to start working instead of continuing their studies. On contrary, skill-intensive industrialization will rise the need for skilled workers and hence increase the value of higher educational attainment.

Despite the controversy of the relationship between industrialization and education, the increment of educational attainment due to industrialization is mediated by three factors: 1) the shift of labor force, 2) educational opportunity and 3) educational accessibility. Firstly, the shift of the labor force from agriculture to manufacturing increases the demand for trained workers (Treiman, 1970). The characteristics of industrialization increase the occupational specialization in the workforce structure, and many of the occupations created during industrialization require a higher level of task-specific knowledge. For example, to be an engineer, logistician or finance professional, relevant educational qualification is compulsory. Eventually, the requirement for worker's educational attainment increases. Education

becomes a mechanism to learn the occupationally relevant skills (Treiman, 1970). Correspondingly, the correlation between educational attainment and occupation was found higher in more industrialized societies (Hurd & Johnson, 1967).

In industrial society, education is no longer merely schooling, it becomes a gateway to work. It is common for people to consider occupational options while making educational decisions. As a result, the importance of educational attainment increases. More and more occupations require specific educational qualifications, and this leads to the increase of public desire for education. The increase of public desire for education is not the only factor that heightens the average educational attainment. The public desire for education can only be fulfilled when the required conditions are met. That brings us to the second and third factors which are educational opportunity and accessibility.

In providing educational opportunity, a free mass educational system is one of the most essential conditions. When the free mass educational system is available, the opportunity to continue schooling will not be restricted by financial capability. A free mass educational system is more than often available in industrial countries (Treiman, 1970) because of the economic surplus (Carl, 2009). In other words, the urge for education is both motivated and attained by industrialization.

Lastly, educational accessibility in industrial society increases because of urbanization. And urbanization is always associated with industrialization (Yang et al., 2019). Industrial and economic growth indirectly increase population density (Brueckner, 2011). The increased population density causes higher school density and higher household consumption. And these lead to a decrease in transport costs (Federman & Levine, 2005). Eventually, educational accessibility can be improved via decreased transport costs (Duflo, 2001).

In short, the change of workforce structure due to industrialization heightens the demand for trained personnel. Thus, the average educational attainment increases as education is a mechanism to turn individuals into trained personnel and to be able to get a job. With a