Investigating the Relationship between Technologic Development and Social Development Dimensions (A Comparative Study of Iranian Provinces)

Majid Fouladiyan [1]
Assistant Professor in Sociology, Ferdowsi University of Mashhad, Mashhad, Iran

Mohammad Tavakkol
Professor in Sociology, University of Tehran, Tehran, Iran

Mohsen Sohanian Haghighi
MA Student in Social Science Research, Ferdowsi University of Mashhad, Mashhad, Iran

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Extended Abstract

1. Introduction

It has been decades since the concept of economic development was considered as one of the steady foundations of planning carried out in the developing countries. Either before or after the Iranian Islamic Revolution, the industrial development has always been the major strategy of the governments. Meanwhile, the impediments of such a strategy have been revealed for years, both in theory and practice. In turn, other strategies such as social and sustainable development have been gaining significance. In the present study, given Iran's priorities on the development of industries and technologies throughout the country, it is attempted to investigate the impacts of technology expansion on various dimensions of social development (distributive and human social development). In this regard, the main questions to be investigated in the study are as follows: 1) What is the status quo of Iranian provinces in terms of social and technologic developments? 2) What are the impacts of technologic development on various dimensions of social development in different Iranian provinces?

2. Theoretical Framework

In the West, technology and social development have been evolving alongside each other (Francois, 2002); however, the conditions of the countries developed after the West are different. One idea regarding such countries points to the advantages of their late development, as it may lead to a form of technologic shift. This method of technologic development can affect social development both positively and

1 Corresponding author, fouladiyan@um.ac.ir

negatively due to its sudden introduction to the society. When the effect is positive, the outcome of mechanism enables manufacturers to act successfully, which is also beneficial to others. These consequences are, in fact, the means through which the benefits of essential dynamics are offered for the sake of the social development of the economy (Bannet, 2004; Bisin & Verdier, 2001; Francois, 2002; Kuznets, 1962). However, the second argument suggesting the negative impact of technologic progress on social development is based on the idea that the possibility of fast improvement can practically result in highly adverse consequences in social development. Such issues can arise when, despite their advantages in increasing productivity, new technology requires imposing heavy damage on a part of vulnerable manufacturers. Habits are resistant and preferences cannot be moderated overnight. When a newer, more efficient technology reaches the utilization stage, it may involve an ever-increasing growth in reliability, even though the reliability levels remain the same as the beginning point for a while. The more the differences between a new technology and its old form, the more the imbalance between the current level of social capital and its required level for new technology. If such a difference is too extensive, then new technology would not persist; consequently, entrepreneurs introducing that technology would fail. Then fewer entrepreneurs would take the risks of modern production; therefore, the dynamic benefits of reliability require positive consequences offered by successful entrepreneurs, while their failure is in fact a threat against the social capital of the society. Evidently, attempts made to introduce significant changes are bound to fail due to the presence of a form of imbalance between the initial level of social capital in the society and the required social capital for new technology (Francois, 2002; Kalen & Fang, 2015).

Under these conditions, the majority of such countries are faced with a sociocultural duality, and become subject to economic and sociocultural imbalance on a daily basis, moving away from various indices of social development (Abdullahi, 1987; Eliyas, 1985; Gharbaghian, 1991; Mousayi, 2009). On the other hand, this type of technologic development has not led to a proper distribution of income and poverty in Peru (Todaro, 1992).

Considering the dominant approach on the strategy of industrial and technologic advances in the country, the purpose of the present study is to evaluate the impact of technologic development on various dimensions of social development.

3. Methodology

The present explanatory study was conducted using the quantitative-comparative method through testing hypotheses or contrasting the theoretical assumptions with the facts implied by these assumptions. The unit and level of analysis were "provinces" and "the country", respectively, and the observation unit was "province/year". The study was carried out according to the quantitative data of

provinces during the years 2001-2016. Secondary analysis was used for data collection.

4. Results

The findings of the study suggest that Semnan Province is ranked first among others with the highest rate of technologic development given its population, followed by Yazd and Qazvin, respectively. Yazd Province is the most developed province in terms of distributive social development. Fars Province is ranked first in terms of social capital, and the highest extent of inequality belongs to Tehran and Golestan Provinces.

The results of regression analysis indicate that almost 44% of variance and changes in the distributive dimension of social development are explained by technologic development. The statistics demonstrate the fact that the technologic development variable directly affects the distributive aspect of social development with a beta value of 0.68. That is, the technologic development variable is effective in term of social development from a distributive dimension. Furthermore, the results also showed that the technologic development of provinces is of no significant impact on the amount of social capital as well as the extent of inequalities in provinces.

5. Conclusion

In this study, the historical process of development theories was examined, showing how the concept of social development has been gaining considerable importance during the past two decades. Moreover, the concept of social development has shown new dimensions as a result of its evolution and growth throughout history. Then, the theoretical relationship between the technologic and social development was clarified based on which the hypotheses of the study were formulated. According to the findings of the study, technologic development affects the distributive dimension of social development, whereas it does not involve significant impact in terms of social capital as well as inequality (human dimensions of social development) in Iranian provinces.

Keywords: Technologic development, Distributive social development, Human social development, Social capital, Inequality

References (in Persian)

1. Abdollahi, M., & Mousavi, M. (2007). Sarmaye ejtemaie dar Iran: Vaziat mojud, durnamye ayande, va emkanshenasi gozar [Social capital in Iran: The current state and the future perspectives and feasibility]. Social Welfare Quarterly, 6(25), 195-233.

2. Azkia, M. (1998). Jameshenasi tose [The sociology of development]. Tehran, Iran: Kalameh.
3. Azkia, M. (2005). Jameshenasi tose va tose nayaftegi rustaie Iran [The sociology of Iranian rural development and underdevelopment]. Tehran, Iran: Etellaat.
4. Balasa, B. (1989). Growth strategies in semi-industrial countries (M. A. Haghi, Trans.). Tehran, Iran: Plan and budget organization of Iran.
5. Brahman, J. (2002). People-oriented development (A. R. Rokneddin Eftekhari & M. Tavakoli, Trans.). Tehran, Iran: Bazargani Press.
6. Chalabi, M. (1996). Jameshenasi nazm [The sociology of discipline]. Tehran, Iran: Ney.
7. Delaney, T. (2012). Classical social theory (B. Sadighi, Trans.). Tehran, Iran: Ney.
8. Elyasi, H. (1985). Vabastegi jahan sevom (Tahlil nazari) [Third World and dependency (A theoretical analysis)]. Tehran, Iran: Etelaat.
9. Ghaffari, G. H. (2015). Gozaresh sanjesh sarmayeh ejtemai keshvar [Measurement of Iran's social capital]. Tehran, Iran: Ministry of Culture and Islamic Guidance.
10. Gharebaghain, M. (1991). Eghtesad rosh va tose [The economy of growth and development]. Tehran, Iran: Ney.
11. Ghazi Moradi, H. (2001). Dar piramoon khodmadari Iraniha [On solipsism of the Iranian]. Tehran, Iran: Akhtaran.
12. Gonj, K. A., & Misra, R. P. (1989). Regional development: Original approaches (A. Mokhber, Trans.). Tehran, Iran: Plan and Budget Organization Press.
13. Habibpour, K., & Safari, R. (2009). Rahnamaye jame karbord SPSS dar tahghighat peymayeshi (Tahlil dadehay kami) [A comprehensive guide to SPSS in survey research (The analysis of quantitative data)]. Tehran, Iran: Motefakeran.
14. Harbison, F., & Myers, C. A. (1971). Human labor and economic growth (H. Motamen, Trans.). Tehran, Iran: Daneshsaraye Ali.
15. Jabari, H. (2003). Tose ejtemai va eghtesadi: Do ruye seke [Social and economic development: Two sides of the same coin?] Social Welfare Quarterly, 3(10), 55-79.
16. Katouzian, M. A. H. (1993). Eghtesade siasi Iran: Az mashrouiat ta payan selse Pahlavi [The political economy of Iran: From constitutional revolution to the end of Pahlavi era] Tehran, Iran: Markaz.
17. Lahsaiezadeh, A. (2002). Jameshenasi tose rustai [The sociology of rural development]. Shiraz, Iran: Roz.
18. Mehregan, M. R. (2008). Pazhuhesh amaliat pishrafte [Advanced operational research]. Tehran, Iran: Academic Books Press.

19. Mousaie, M. (2009). Rabete tose eghtesadi va tose ejtemai [The relationship between economic development and social development]. Rahbord Yas, 20(5), 96-117.
20. Salimifar, M. (2009). Eghtesad tose (Mozuat montakhab) [The economy of growth (Selective topics)]. Mashhad, Iran: Movahed.
21. Statistical Center of Iran. (2016). Sarshomari nofus va maskan [Population and housing censuses in 2016]. Tehran, Iran: Statistical Center of Iran Press.
22. Tajbakhsh, K. (2004). Sarmaye ejtemai va siasathaye ejtemai [Social capital and social policies]. Social Welfare Quarterly, 3(10), 155-200.
23. Tavakkol, M. (1994). Parametrhaye formi va mohtavi enteghal fanavari: Masalei dar jameshenasi elm va technology. [The form and content parameters in transferring the technology: An issue in the sociology of science and technology]. Journal of Social Sciences Letter, 7(7), 109-116.
24. Tavakkoli Hosseini, N. (1996). Jameshenasi sanati [Industrial sociology]. Tehran, Iran: Payam-e Noor University Press.
25. Todaro, M. (1992). *Third world economic development* (G. A. Farjadi, Trans.). Tehran, Iran: Institute for Research and Planning in Higher Education.

References (in English)

1. Abdolrahman, O. I. (2010). Time poverty: A contributor to women's poverty. *Journal of Statistique African, 11*(3), 16-37.
2. Bannet, F. (2004). *Development of social security, social policy review*. Bristol, England: The Policy Press.
3. Bisin, A., & Verdier, T. (2001). The economics of cultural transmission and the dynamics of preferences. *Journal of Economic Theory, 97*(3), 298-319.
4. Callen, J. L., & Fang, X. (2015). Religion and stock price crash risk. *Journal of Financial and Quantitative Analysis, 50*(1-2), 169-195.
5. Domar, E. (1975). *Essay on the theory of economic growth*. Oxford, England: Oxford University Press.
6. Feldman, R. E. (1968). Response to compatriot and foreigner who seek assistance. *Journal of Personality and Social Psychology, 10*(3), 202-214.
7. Francois, P. (2002). *Social capital and economic development*. London, England: Routledge.
8. Glaeser, E. L., Laibson, D., & Sacerdote, B. (2002). An economic approach to social capital. *The Economic Journal, 112*(483), 437-458.
9. Grootaert, C., & Bastelear, T. (2002). *The role of social capital in development*. Cambridge, England: Cambridge University Press.
10. Hagen, E. E. (1980). *On the theory of social change.* New York, NY: The Dorsay Press.
11. Hahn, F. H., & Matthews, R. C. O. (1964). The theory of economic growth: A survey. *The Economic Journal, 74*(296), 779-902.

12. Jacobs, G., Macfarlane, R., & Asokan, N. (1997). *Comprehensive theory of social development*. Retrieved from https:// www .icpd. org/ development _ theory / comprehensive _theory_of_social_development.htm:
13. Kaldor, N. (1957). A model of economic growth. *The Economic Journal, 67*(268), 591-624.
14. Kuznets, S. (1955). Economic growth and income inequality. *The American Economic Review, 45*(1), 1-28.
15. Matsumoto, M., Inoue, K., Farmer, J., Inada, H., & Kajii, E. (2010). Geographic distribution of primary care physicians in Japan and Britain. *Health and Place, 16*(1), 164-166.
16. Mazumdar, K. (1996). An analysis of causal flow between social development and economic growth: The social development index. *American Journal of Economics and Sociology, 55*(3), 361-383.
17. Mead, J. E. (1967). *A neo-classical theory of economic development*. Oxford, England: Oxford University Press.
18. Offe, C. (2002). A decline of social capital? The German case. In R. D. Putnam (Ed.), *Democracies in flux: The evolution of social capital in contemporary society* (pp. 111-113). Oxford, England: Oxford University Press.
19. Pasinetti, L. L. (1962). Rate of profit and income distribution in relation to the rate of economic growth. *The Review of Economic Studies, 29*(4), 267-279.
20. Putnam, R., Leonardi, R., & Nanetti, R. (1994). *Making democracy work: Civic traditions in modern Italy*. Princeton, NJ: Princeton University Press.
21. Solow, R. M. (1956). A contribution to the theory of economic growth. *The Quarterly Journal of Economics, 70*(1), 65-94.
22. Veblen, T. (1912). *The theory of the leisure class: An economic study of institutions*. New York, NY: B. W. Huebsch.