



Review

The Application of Human Capital Theory and Educational Signalling Theory to Explain Parental Influences on the Chinese Population's Social Mobility Opportunities

Jason Hung * and Mark Ramsden

Department of Sociology, University of Cambridge, Cambridge CB2 1SB, UK; mjr60@cam.ac.uk

* Correspondence: ysh26@cam.ac.uk

Abstract: Existing studies argue life chances are, in part, vertically reproduced. Such a statement is applicable to the Chinese contexts as, but not limited to, parental hukou status, to some extent, determines the life chances their children receive. In this essay, the author would like to introduce human capital theory (HCT) and educational signalling theory (EST), and assess how the applications of each of these two models can enrich the understanding of vertical reproduction of individuals' social mobility opportunities. The author would also present the limitations of each of these two models when addressing relevant Chinese contexts.

Keywords: human capital; educational signal; education; labour market; social mobility; social reproduction; China



Citation: Hung, Jason, and Mark Ramsden. 2021. The Application of Human Capital Theory and Educational Signalling Theory to Explain Parental Influences on the Chinese Population's Social Mobility Opportunities. *Social Sciences* 10: 362. <https://doi.org/10.3390/socsci10100362>

Academic Editor: Nigel Parton

Received: 18 August 2021

Accepted: 26 September 2021

Published: 28 September 2021

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2021 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

Since the economic reforms and opening up of China in 1978, the country has been undergoing a series of hukou reforms. The hukou system was introduced initially in cities in 1951 and was extended to villages in 1955 (Lu and Wan 2014). However, not until in 1958 was the hukou system used to restrict the geographical mobility of Chinese citizens (Fan 2008). The design of the system followed the Soviet propiska (i.e., internal passport), aiming to stimulate the country's then planned economy by encouraging city dwellers to support the heavy industrial development and village residents to maintain the surplus of agricultural products (Donzuso 2015). Each Chinese citizen is allocated either a rural or urban hukou. Under the system, hukou status is primarily inherited from their parents at birth. Before 1998, children's hukou was inherited from their mothers (Wang and Schwartz 2018). Since 1998, however, children can choose to inherit either their mothers' or fathers' hukou location and type (i.e., rural/agricultural or urban/non-agricultural) (Congressional Executive Commission on China (CECC) 2005; Song and Smith 2019). Children born in cities whose both parents have rural hukou inherit rural hukou (Montgomery 2012).

Under such reforms, mobility barriers have gradually been removed, leading to the gain of momentum of the rural-to-urban migration (Chen and Hoy 2011; Meng 2016). Rural-to-urban migrants have been encouraged to work in cities in the construction and services industries due to their low wage levels, by-products of occupational discrimination against the migrant populations (Bengoa and Rick 2020; Hou et al. 2019). Their opportunities to capitalise on rural-to-urban migration and economic development of China for the growth of life chances have been hampered, since the hukou system has restricted the welfare and resource distribution to these migrant cohorts (Piotrowski et al. 2016).

To date, to a large extent, when rural individuals migrate to urban spaces, they are excluded from the entitlement to healthcare, unemployment insurance, pensions, subsidised education, housing, and alternative social welfare that are restrictively allocated to urban Chinese communities (Lin and Rodgers 2018; Tani 2015). This is, in part, because rural hukou holders residing in cities are denied work in the public sectors and do not

enjoy the associated benefits, including unemployment subsidies and old-age pensions. These migrant cohorts have, thus, to work in non-public sectors, implying more working hours, lower wages, and worse working conditions (Akgüç et al. 2014).

Even if rural hukou holders reside in villages, agricultural households are entitled to significantly fewer social benefits and welfares, relative to their local urban hukou holding counterparts (Rarick et al. 2017). For example, urban hukou holders are entitled to preferential access to higher-ranked schools, better-paid and less labour-intensive occupations and more state-subsidised welfares (Bengoa and Rick 2020). These descriptions briefly outline that both rural-to-urban migrant and local rural populations, relative to individuals holding urban hukou, are subject to institutional discrimination as a result of their membership of rural hukou.

Western studies argue life chances are, in part, vertically reproduced (Friedman 2014; Bourdieu and Passeron 1977). Such a statement is applicable to the Chinese contexts as, but not limited to, parental hukou status, to some extent, determines the life chances their children receive. Recent Chinese literature notes that being born in urban regions, having higher parental educational attainment and enjoying higher household income levels positively influence Chinese children's career development and income earnings in the long-term (Zhang and Eriksson 2010; Gong et al. 2012). Such contexts indicate that certain parental advantages, aside from the inheritance of urban hukou, play an important role in prompting next generations' acquisition of life chances. In this essay, the author would like to introduce human capital theory (HCT) and educational signalling theory (EST), and assess how the applications of each of these two models can enrich the understanding of vertical reproduction of individuals' social mobility opportunities.

2. Human Capital Theory

In the section, the author briefly outlines the genesis of HCT. Then the author assesses how HCT can be applied to explain the desirability to reach higher education level and obtain urban hukou status. Here entering higher education is one of the requirements enabling hukou conversion from rural to urban status. They also evaluate how the concepts of the inheritability of human capital (HC) can be employed to address the essay aim on investigating parental influences on individuals' social mobility opportunities.

HCT was pioneered by University of Chicago economists, led by Schultz (1962, 1963) and Becker (1962), from 1960. HCT views that all social phenomena are initiated by individual behaviours, and individuals form HC by acting in their own interests (Blaug 1976, p. 830). Relevant theorists consider how education and other characteristics help create skills and acquire knowledge that can be used as an investment in the labour productivity (Robeyns 2006, p. 72; Blaug 1976, p. 827). Schultz believes that, along with other forms of capital, the possession of HC helps provide economic services. The acquired human capabilities—a term that will be scholarly defined and discussed in the CT section—are not free goods; they are products of the allocation of scarce resources (to be specific, they are products of investments in man) (Flamholtz 1971, p. 829; Sweetland 1996, p. 341). For example, policymakers investing resources in schooling aim to raise the future income levels earned by the beneficiaries due to the latter's disposition to translate educational credentials or academic knowledge into professional opportunities or skills (Bowman 1966, p. 114). Aside from education, on-the-job training, labour migration, and health are other major classes of HC (Schultz 1961, pp. 8–9; Flamholtz 1971, p. 830). It is noteworthy that, in the Chinese contexts, hukou status should also be deemed as a form of contributor to HC, because the possession of urban hukou raises human capabilities to engage in labour and professional productivity. Such a growth of productivity would lead to individuals' increase in salary earnings (Tan 2014, p. 413; Robeyns 2006, p. 72). In this essay, the author would primarily focus on the discussion of two forms of HC, namely education level and hukou status. It is because these two classes of HC do not only raise the salary levels of individuals in China, but are arguably among the most crucial factors to minimising unemployment, improving employment conditions and security, and, ultimately, increas-

ing the opportunities of upward social mobility in Chinese contexts (Tan 2014, p. 424). Also, the levels of ownership of these two classes of HC would determine the degrees of acquisition of other forms of HC. For example, better parental education enhances the adoption of contraceptive techniques, and better educated individuals are more likely to learn more about nutritional and healthy lifestyles (Psacharopoulos and Patrinos 2008, p. 345; Sweetland 1996, p. 341). Similarly, urban hukou holding individuals are better covered by health insurance schemes, relative to rural-to-urban migrant and rural native counterparts (Bengoa and Rick 2020). Urban hukou holders are also subsidised to visit better-facilitated public hospitals in cities, while those holding rural hukou are not subsidised by local governments and have to alternatively visit worse-facilitated private clinics (ibid.). Therefore, the further the entitlement to educational opportunities and acquisition of urban hukou would improve the health conditions of individuals.

Schultz (1961, p. 4) argues that “young men entering the labour force are said to have an advantage over unemployed older workers in obtaining satisfactory jobs. Most of these young people possess twelve years of school[ing], most of the older workers six years or less. The observed advantage of these young workers may therefore result . . . from real differences in productivity connected with one form of human investment, i.e., education.” Here Schultz emphasises on the importance of education as an instrument to raise professional and social mobility opportunities in the long-term. As a desirable output, it is plausible that upwardly socially mobile individuals, along with their family members, can enjoy upgraded standard of living. For rural-to-urban migrant workers or native rural labourers, upward social mobility would result in the alleviation in rural poverty and destitution. Moreover, upward social mobility does not only benefit a generation of workers or employees, but also their offspring—who can enjoy the privileges derived from better parental education levels and inheritance of urban hukou status and find it easier to access to the gateway to the accumulation of a range of capital (Friedman 2014). Therefore, according to HC theorists, acquiring HC would prompt intergenerational reproduction of a range of capital and strengthen beneficiaries’ upward social positions across generations.

The application of HCT comes with a major shortcoming: Such a theory is too economic, where the exclusive benefits from the accumulation of HC are considered as a rise in productivity and salary levels. Such a limitation does not take social, cultural and other non-material dimensions of life into account (Robeyns 2006, p. 72). To apply HCT, researchers should fully or partially be economically-oriented, where they should discuss how the acquisition of HC would raise the collection of social, cultural, linguistic, political benefits and perhaps more capital with an indication of how earning such a list of resources enhances the labour productivity, chances of professional entry and, as a whole, economic wellbeing of Chinese populations. Here economists claim that the acquisition of a range of resources gained by a rise in HC is strongly associated with the earnings of economic capital.

Another shortcoming of the application of HCT is that such a theory assumes that individuals are always rational in decision making. HC theorists posit that individuals will only invest in education as long as the marginal benefits are valued more than, or are as valuable as, the marginal costs. This means individuals will estimate the future gains and costs from a further increase in HC investment and make rational decisions on whether they should perform the investment per se (Tan 2014, p. 420). The assumption of rational decision making may not always hold, in reality, as individuals may make certain contributions even if the costs outvalue what they can gain in return given the fact that, for example, they enjoy the psychic satisfactions by making such decisions (Tan 2014, p. 420; Bowman 1966, p. 114). Although rational decision making does not always stand, the author posits the adoption of HCT to explain parental influences on individuals’ social mobility opportunities should be, to a certain extent, valid because they believe most Chinese populations’ investment in education is rationally driven by the motives of pursuing upward social mobility and more life chances in the long-term for both themselves and their next generations. If in any circumstance economists observe

that Chinese individuals' investment in education does not directly link to economic gains, they should be aware of the potential situation where such cohorts do not solely pursue educational attainment based on rational decision making.

Another criticism concerning education level when applying HCT is that quantity rather than quality of schooling is often exclusively measured. [Psacharopoulos and Patrinos \(2008, p. 349\)](#) argue that quality of schooling is an important determinant of earnings. Researchers are inclined to adopt years of schooling to measure education level due to the absence of appropriate proxies indicating the quality of schooling in available datasets. The author acknowledges there may be measurement errors to some extent when quality of schooling is not taken into account.

3. Educational Signalling

In order to clarify why better-educated individuals enjoy more desirable opportunities of professional entry and enhanced degree of economic wellbeing, in this section, the author would like to utilise the application of education signalling to address the nuanced relationship between education level and professional entry. Such an understanding is essential to unveiling why better education level can be seen as an instrument to realise upward social mobility in Chinese contexts.

From an employer's perspective, they prefer hiring workers with good work ethics, intelligence, and willingness to conform to the values and norms of the workplaces. However, they are unable to fully assess job applicants' suitability for the positions until the latter group begins working. Employers would therefore collect reliable information, known as signals, which, on average, hint at the labour productivity of the job applicants. Education is considered as one of the primary signals ([Martin 2019, p. 1](#)). The more years individuals have to adapt to the system of formal education, despite some failing to earn education credentials in the majors related to the jobs they apply for, the more likely that they are preferred in the labour market, according to the signalling model. This is because these individuals are likely to possess the traits employers are looking for—for example, adequate degree of intelligence, motivation, and conformity (*ibid.*). Also, better-educated employees usually demonstrate more perseverance, signalling lower propensities for resignation or absence. They may, additionally, have healthier lifestyles due to the more acquisition of nutritional knowledge. Such dispositions and habits are preferred by most employers ([Weiss 1995, pp. 133, 141](#)). Thus, the signalling model helps explain why better-educated rural-to-urban migrant workers are welcomed in the urban labour market while their worse-educated counterparts experience substantial difficulties to enjoy urban occupational security ([Rospigliosi et al. 2013, p. 421](#)).

When upper education levels are needed for some kinds of employment, the signalling effect prompts the expectations of higher educational attainment on job candidates applying for most, if not all, positions. Less educated individuals are restricted or even excluded from occupational entry, although they may apply for jobs that do not strictly require advanced academic or professional knowledge ([Martin 2019, p. 3](#)). This explains that higher educational attainment may not necessarily serve as a prerequisite to fulfil occupational tasks, and perhaps may not result in further labour productivity to some degree. Yet, those having better educational profiles are desired for employment in the labour market.

Individuals from financial insecure and rural hukou holding backgrounds, for example, are underprivileged to thrive in educational attainment ([Afridi et al. 2014](#)). When university credentials act as a prominent signal for higher labour productivity, barriers to higher education, in the forms of financial shortage and rural hukou status in Chinese contexts, inherited from parents, significantly undermine the equal distribution of opportunities for professional development ([Martin 2019, p. 2](#)).

Here higher education functions as a screening device and categorises individuals of differing abilities and specialisations, therefore conveying information to employers on what kinds of labour they would like to "purchase" ([Martin 2019, p. 1](#); [Cai 2013, p. 459](#)). For example, better-educated and better-skilled graduates and job seekers, including those

who are rural-to-urban migrants in Beijing, are preferred to occupy higher-paid and more prestigious occupations in the professional fields of technology, commercial services, and management (Song 2016). Hence, for individuals with better academic and/or professional profiles, alongside specialised knowledge and skills corresponding to the job natures of available positions, it is plausible that employers from more esteemed companies or professional fields would prioritise hiring them.

While better education level serves as a signal to assess job applicants' initial productivity, on-the-job training can also be seen as a signal but to examine their subsequent productivity (Rospigliosi et al. 2013, p. 422). In existing studies, the levels of on-the-job training individuals receive are predominantly not taken into account. This is because on-the-job training can hardly be quantified, especially when training outputs of different qualities and fields are not directly comparable. The author, thereby, only considers formal education as an educational signal when analysing individuals' odds of professional entry and, ultimately, occupational, and economic wellbeing.

Although many less-educated individuals may have the potential to be productive, their lack of signalling pre-conditions in relation to upper social position, financial security or positive parental influences would prompt employers to screen them out from job considerations (ibid., p. 428). Such an analysis stated in the education signalling model resonates in Chinese contexts, where, as discussed, individuals with education-related underprivileged symbols encounter more barriers to educational attainment, professional success, and life chances as a whole.

Not only do disadvantaged cohorts experience substantial difficulties to succeed academically, but the educational obstacles they face are piling up. In contemporary China, education becomes more accessible to the poor, due to state and local governments' interventions (Chen and Hoy 2011). In response to educational massification, existing literature argues more privileged individuals pursue more advanced levels of educational credentials, such as postgraduate degrees, in order to send a stronger educational signal to the urban labour market. Credential inflation implies that disadvantaged cohorts have to endeavour to invest even more time and financial resources to reach upper education levels for the purpose of surviving in the urban labour market. Underprivileged populations failing to keep up the pace of credential inflations due to the concerns of financial unaffordability would lose their limited signal of employability, compounding their restrictive entitlements to life chances in the long-term (Martin 2019, p. 2). Such a circumstance helps explain why the education signalling model is important for, and included in, existing research when such project leans on the broad themes of social stratification and sociology of education. In addition, poor rural local governments, but not their richer urban counterparts, may be financially incapable of subsidising education, including compulsory education, for villagers (Song and Zhou 2019). Therefore, such socioeconomic and socioeducational arrangements stratify individuals' entitlement to life chances to a significant extent, fostering the adoption and application of EST when addressing such an education-related societal issue in contemporary China.

A shortcoming of the education signalling model is that it assumes educational signals represent a core evaluation on individuals' labour or professional potentials (Bergh et al. 2014, p. 1337). However, in reality, today's employers may emphasise other non-education-related attributes when hiring graduates and job candidates. Such attributes, in Chinese contexts, include hukou status, residency, social network, and cultural legitimacy, among others. This list of attributes may be, more or less, as important as the educational signals when Chinese employers consider recruiting suitable job candidates. A sole evaluation on job applicants' suitability and potentials grounded in the educational aspect may lead to the neglect of job applicants' non-education-related qualities and traits. Any misevaluation may foster the occurrence of mismatches in the labour market, where unsuitable individuals may be employed to perform tasks in ineffective, inefficient manners (Levels et al. 2014, p. 342). Beyond the discipline of economics, social scientists should be aware of how individuals' holistic advantage, rather than just economic edge, would

facilitate their success in professional entry. Such a holistic development is, for example, considered by sociologists where individuals holding more economic and non-economic capital are prone to the realisation of upward social mobility in the long-term.

Moreover, the model posits that job-seekers aim at maximising the returns to their educational investments and searching for the most financially preferable jobs given their education and skill levels (ibid., p. 344). However, education level is not exclusively an economic instrument and individuals can seek for career entry beyond financial consideration. Therefore, the over-emphasis on rational, economic-oriented decision making would misevaluate how graduates and job seekers react in the labour market. The explanations of the EST would conceptually facilitate the sociological discussion on how education levels are associated with labour market entry and the pool of life chances.

4. Conclusions

As both addressed theories are economically driven, the understanding of parental influences on individuals' education and labour market successes from a non-economic perspective can hardly be attained. The author suggests social researchers to consider adding non-economic models when examining such contexts. Pierre Bourdieu's concepts of capital (namely economic, social, cultural, and symbolic capital) could be taken into consideration when investigating how individuals entitled to, or acquiring, a list of capital can climb up the social ladder more successfully than their counterparts with a lack of such resources.

Author Contributions: Conceptualization, J.H.; validation, J.H.; formal analysis, J.H.; investigation, J.H.; writing—original draft preparation, J.H.; writing—review and editing, J.H.; supervision, M.R. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Data Availability Statement: Not applicable.

Conflicts of Interest: The authors declare no conflict of interest.

References

- Afridi, Farzana, Sherry Xin Li, and Yufei Ren. 2014. Social Identity and Inequality: The Impact of China's Hukou system. *Journal of Public Economics* 123: 17–29. [CrossRef]
- Akgüç, Mehtap, Xingfei Liu, and Massimiliano Tani. 2014. *Expropriation with Hukou Change: Evidence from a Quasi-Natural Experiment*. IZA Discussion Paper No. 8689. Bonn: IZA Institute of Labour Economics. [CrossRef]
- Becker, G. 1962. Investment in Human Capital: A Theoretical Analysis. *Journal of Political Economy* 70: 9–49. [CrossRef]
- Bengoa, Marta, and Christopher Rick. 2020. Chinese Hukou Policy and Rural-to-Urban Migrants' Health: Evidence from Matching Methods. *Eastern Economic Journal* 46: 224–59. [CrossRef]
- Bergh, Donald D., Brian L. Connelly, David J. Ketchen Jr., and Lu M. Shannon. 2014. Signalling Theory and Equilibrium in Strategic Management Research: An Assessment and a Research Agenda. *Journal of Management Studies* 51: 1334–60. [CrossRef]
- Blaug, Mark. 1976. The Empirical Status of Human Capital Theory: A Slightly Jaundiced Survey. *Journal of Economic Literature* 14: 827–55.
- Bourdieu, Pierre, and Jean-Claude Passeron. 1977. *Reproduction in Education, Society, and Culture*. London: SAGE Publications.
- Bowman, Mary Jean. 1966. The Human Investment Revolution in Economic Thought. *Sociology of Education* 39: 111–37. [CrossRef]
- Cai, Yuzhuo. 2013. Graduate Employability: A Conceptual Framework for Understanding Employers' Perceptions. *Higher Education* 65: 457–69. [CrossRef]
- Chen, Yu, and Caroline Hoy. 2011. Explaining Migrants' Economic Vulnerability in Urban China. *Asian Population Studies* 7: 123–36. [CrossRef]
- Congressional Executive Commission on China (CECC). 2005. China's Household Registration System: Sustained Reform Needed to Protect China's Rural Migrants. Available online: <https://www.cecc.gov/sites/chinacommission.house.gov/files/CECC%20Special%20Topic%20Paper%20-%20China%27s%20Household%20Registration%20System%20-%20Sustained%20Reform%20Needed%20to%20Protect%20China%27s%20Rural%20Migrants%20-%202010.7.05.pdf> (accessed on 24 September 2021).
- Donzuso, N. 2015. Equality of Opportunities' in Education for Migrant Children in China. *Global Social Welfare* 2: 9–13. [CrossRef]
- Fan, C. Cindy. 2008. Migration, Hukou and the City. In *China Urbanizes: Consequences, Strategies and Policies: Directions in Development Countries and Regions*. Edited by Shahid Yusuf and Anthony Saich. Washington, DC: The World Bank, pp. 65–89.
- Flamholtz, Eric. 1971. Reviewed Worker(s): Investment in Human Capital: The Role of Education and of Research by Theodore W. Schultz. *The Accounting Review* 46: 829–31.

- Friedman, Sam. 2014. The Price of the Ticket: Rethinking the Experience of Social Mobility. *Sociology* 48: 352–68. [\[CrossRef\]](#)
- Gong, Hong, Andrew Leigh, and Xin Meng. 2012. Intergenerational Income Mobility in Urban China. *Review of Income and Wealth* 58: 481–503. [\[CrossRef\]](#)
- Hou, Bo, James Nazroo, James Banks, and Alan Marshall. 2019. Impacts of Migration on Health and Wellbeing in Late Life in China: Evidence from the China Health and Retirement Longitudinal Study (CHARLS). *Health & Place* 58: 102073.
- Levels, Mark, Rolf Van der Velden, and Valentina Di Stasio. 2014. From School to Fitting Work: How Education-to-Job Matching of European School Leavers is Related to Educational System Characteristics. *Acta Sociologica* 57: 341–61. [\[CrossRef\]](#)
- Lin, Carl, and Yana van der Meulen Rodgers. 2018. *Parental Migration Decisions and Child Health Outcomes: Evidence from China*. IZA Discussion Paper No. 11986. Bonn: IZA Institute of Labour Economics.
- Lu, Ming, and Guanghua Wan. 2014. Urbanisation and Urban Systems in the People's Republic of China: Research Findings and Policy Recommendations. *Journal of Economic Surveys* 28: 671–85. [\[CrossRef\]](#)
- Martin, Christopher. 2019. The Case Against (Actually Existing) Higher Education: Human Capital, Educational Signalling, and Justice. *Journal for Research and Debate* 2: 1–5.
- Meng, Lei. 2016. Permanent Migration Desire of Chinese Rural Residents: Evidence from Field Surveys, 2006–2015. *China Economic Review* 61: 101262. [\[CrossRef\]](#)
- Montgomery, Jessica L. 2012. The Inheritance of Inequality: *Hukou* and Related Barriers to Compulsory Education for China's Migrant Children. *Pacific Rim Law & Policy Journal* 21: 591–622.
- Piotrowski, Martin, Yuying Tong, Yueyun Zhang, and Lu Chao. 2016. The Transition to First Marriage in China, 1966–2008: An Examination of Gender Differences in Education and *Hukou* Status. *European Journal of Population* 32: 129–54. [\[CrossRef\]](#) [\[PubMed\]](#)
- Psacharopoulos, George, and Harry Patrinos. 2008. Education and Human Capital. In *International Handbook of Development Economics Volume One*. Edited by Amitava Krishna Dutt and Jaime Ros. Cheltenham: Edward Elgar Publishing Limited, pp. 341–55.
- Rarick, Jason R. D., Carly Tubbs Dolan, Wen-Jui Han, and Jun Wen. 2017. Relations between Socioeconomic Status, Subjective Social Status, and Health in Shanghai, China. *Social Science Quarterly* 99: 390–405. [\[CrossRef\]](#)
- Robeyns, Ingrid. 2006. Three Models of Education: Rights, Capabilities and Human Capital. *Theory and Research in Education* 4: 69–84. [\[CrossRef\]](#)
- Rospigliosi, Asher Pericles, Sue Greener, Tom Bourner, and Maura Sheehan. 2013. Human Capital or Signalling Unpacking the Graduate Premium. *International Journal of Social Economics* 41: 420–32. [\[CrossRef\]](#)
- Schultz, Theodore W. 1961. Investment in Human Capital. *The American Economic Review* 51: 1–17.
- Schultz, Theodore W. 1962. Reflections on Investment in Man. *Journal of Political Economy* 70: 1–8. [\[CrossRef\]](#)
- Schultz, Theodore W. 1963. *The Economic Value of Education*. New York: Columbia University Press.
- Song, Qian, and James P. Smith. 2019. *Hukou* System, Mechanisms, and Health Stratification across the Life Cross in Rural and Urban China. *Health & Place* 58: 102150. [\[CrossRef\]](#)
- Song, Yang, and Guangsu Zhou. 2019. Inequality of Opportunity and Household Education Expenditures: Evidence from Panel Data in China. *China Economic Review* 55: 85–98. [\[CrossRef\]](#)
- Song, Yu-Ling. 2016. Newcomers to Middle Class: The Social and Spatial Mobility of New Urban Migrants. *China Review* 16: 121–47.
- Sweetland, Scott R. 1996. Human Capital Theory: Foundations of a Field of Inquiry. *Review of Educational Research* 66: 341–59. [\[CrossRef\]](#)
- Tan, Emrullah. 2014. Human Capital Theory: A Holistic Criticism. *Review of Education Research* 84: 411–45. [\[CrossRef\]](#)
- Tani, Massimiliano. 2015. *Hukou* Changes and Subjective Well-Being. IZA Discussion Papers No. 9451. Bonn: IZA Institute of Labour Economics.
- Wang, Yu, and Christine R. Schwartz. 2018. *Hukou* Inter-marriage and Social Exclusion in China. *Research in Social Stratification and Mobility* 56: 28–39. [\[CrossRef\]](#)
- Weiss, Andrew. 1995. Human Capital vs. Signalling Explanations of Wages. *Journal of Economic Perspectives* 9: 133–54. [\[CrossRef\]](#)
- Zhang, Yingqiang, and Tor Eriksson. 2010. Inequality of Opportunity and Income Inequality in Nine Chinese Provinces. *China Economic Review* 21: 607–16. [\[CrossRef\]](#)