Australian National University

Crawford School of Public Policy

CAMA

Centre for Applied Macroeconomic Analysis

The Myth of Meritocracy: Does Meritocracy Promote Economic Growth? Evidence from Turkey

CAMA Working Paper 47/2024
July 2024

Barış Alpaslan
Social Sciences University of Ankara
Centre for Applied Macroeconomic Analysis, ANU

Mevza Kurtulmuşlar
Social Sciences University of Ankara

Abstract

This paper makes a contribution to the literature in a number of important ways: First, this paper offers a two-period OLG model of endogenous growth that incorporates both meritocracy and social capital: in our theoretical framework, meritocracy can promote social capital. Second, this paper provides a measure of the meritocracy degree to determine the extent to which there is an incidence of nepotism in the society this is because meritocracy is the opposite of nepotism, that is, the lower meritocracy degree, the higher nepotism is or the other way around. Third, this is the first study that has provided a solid evidence base for Turkey in linking the notion of meritocracy with social capital and explaining its implications for long-run growth. To this end, we calibrate our theoretical model based on a combination of theoretical restrictions and empirical observations. We conduct several policy experiments. We first consider an increase in the share of public spending on social capital building activities and infrastructure investment under two scenarios: each increase is financed by a cut in either other items or education. We also run a policy experiment associated with a decrease in the share of non-meritocratic political elites. In general, the findings of our policy experiments show that a higher meritocracy degree can promote social capital and therefore long-run growth. However, when an increase in the share of government spending on either social capital building activities or infrastructure investment is financed by a cut in education, in the benchmark case, the net impacts on long-run growth turn out to be negative or very small due to the trade-off effect because it seems that the cut in the share of government spending on education is detrimental to growth.

Keywords

meritocracy, social capital, political capital, economic growth, Turkey

JEL Classification

D73, J10, J45, O10, O41

Address for correspondence:

(E) cama.admin@anu.edu.au

ISSN 2206-0332

The Myth of Meritocracy: Does Meritocracy Promote Economic Growth? Evidence from Turkey*

Barış Alpaslan† and Mevza Kurtulmuşlar‡

July 16^{th}, 2024

Abstract

This paper makes a contribution to the literature in a number of important ways: First, this paper offers a two-period OLG model of endogenous growth that incorporates both meritocracy and social capital: in our theoretical framework, meritocracy can promote social capital. Second, this paper provides a measure of the meritocracy degree to determine the extent to which there is an incidence of nepotism in the society this is because meritocracy is the opposite of nepotism, that is, the lower meritocracy degree, the higher nepotism is or the other way around. Third, this is the first study that has provided a solid evidence base for Turkey in linking the notion of meritocracy with social capital and explaining its implications for long-run growth. To this end, we calibrate our theoretical model based on a combination of theoretical restrictions and empirical observations. We conduct several policy experiments. We first consider an increase in the share of public spending on social capital

*We would like to thank the Ph.D. thesis committee members, Prof. Ömer Demir and Prof. Metin Toprak for facilitating discussions during the monitoring/evaluation meetings. We are also grateful to Enes Polat, the former President of State Personnel Administration in collecting data for our calibration exercise. This paper is based on the first essay of the Ph.D. thesis of Mevza Kurtulmuşlar under the supervision of Barış Alpaslan.

†Associate Professor, Department of Economics, Social Sciences University of Ankara, Ankara, Turkey. The author is also research associate at the Centre for Applied Macroeconomic Analysis (CAMA) in the Crawford School of Public Policy, Australian National University. E-mail: baris.alpaslan@asbu.edu.tr.

‡Department of Economics, Social Sciences University of Ankara, Ankara, Turkey. E-mail: mevza.kurtulmuslar@asbu.edu.tr.

building activities and infrastructure investment under two scenarios: each increase is financed by a cut in either other items or education. We also run a policy experiment associated with a decrease in the share of non-meritocratic political elites. In general, the findings of our policy experiments show that a higher meritocracy degree can promote social capital and therefore long-run growth. However, when an increase in the share of government spending on either social capital building activities or infrastructure investment is financed by a cut in education, in the benchmark case, the net impacts on long-run growth turn out to be negative or very small due to the trade-off effect because it seems that the cut in the share of government spending on education is detrimental to growth.

Keywords: Meritocracy, Social Capital, Political Capital, Economic Growth, Turkey

JEL Classification Numbers: D73, J10, J45, O10, O41

1 Introduction

Nepotism is one of the worst forms of corruption and has attracted considerable attention, both scholarly and popular. Nepotism can be experienced both in the public and private sector (Scoppa, 2009; Allesina, 2011; Geys, 2017; Szakonyi, 2019) and it has unintented consequences for the use of public services (Rauch and Evans, 2000; Kim, 2007; Macchiavello, 2008; Scoppa, 2009; Kyriacou, 2016; Akbari et al., 2019; Wu and Tang, 2019), for investment decisions (Bramoulle and Goyal, 2016; Rius-Ulldemoins et al. 2019), as well as for employment decisions (Levine et al. 2010; Jaimovich and Rud, 2014; Ragauskas and Valeskaite, 2020). Besides, the accountability and transparency in good governance becomes weaker as the incidence of nepotism increases (Fafchamps and Labonne, 2020). Tolerance towards workplace misbehavior and mismanagement also becomes higher in the public sector as a result of the nepotism (Booth and Richard, 2012; Hudson et al. 2019). In addition, individuals with political connections are less likely to devote their time to building assets, such as the stock of knowledge and skills, thereby leading them to have a relatively low level of human capital (Coco and Lagravinese, 2014; Geys, 2017; Folke et al., 2017; George and Ponattu, 2018; De la Croix and Goni, 2021; Perez-Alvarez and Strulik, 2021). Due to the unequal treatment of certain groups of people within the society, nepotism harms economic growth because it does lead to social unrest and distorts generalized trust, thereby reducing the stock of social capital in the society (Vveinhardt and Sroka, 2020; Leung and Sharma, 2021; Gilani, 2020). On the contrary, meritocracy refers to the notion of a political system under which people are selected according to merit so it can be an ideal solution for reducing nepotism and therefore promoting economic growth.

Despite its importance in the economics discipline, to the best of our knowledge, no previous study has so far addressed the role of meritocracy in social capital and its implications for long-run growth. In this regard, this paper makes a contribution

to the literature in a number of important ways: First, this paper offers a two-period OLG model of endogenous growth that incorporates both meritocracy and social capital: in our theoretical framework, meritocracy can promote social capital. Second, this paper provides a measure of the meritocracy degree to determine the extent to which there is an incidence of nepotism in the society this is because meritocracy is the opposite of nepotism, that is, the lower meritocracy degree, the higher nepotism is or the other way around. In our model, meritoracy degree is determined by two factors. First, it depends on human capital because as the stock of human capital in the society increases, meritocracy becomes more visible. Human capital is, however, scaled by political capital because as the stock of political capital increases, the marginal benefit of an increase in the existing stock of human capital becomes less relevant for meritocracy. Therefore, political capital is also critical for measuring the meritocracy degree. Indeed, it is assumed that political capital is an abstract capital that is held in the form of power by an entity (Bourdieu, 1991), and that political elites value their political connections (Fafchamps and Labonne, 2020) because these connections allow them to exert a political influence (Ehrlich and Lui, 1999) on decision-making processes in many aspects. Second, meritocracy degree is negatively associated with the share of non-meritocratic political elites in the society. In other words, the higher share of non-meritocratic political elites in the society, the lower meritocracy degree is. Third, this is the first study that has provided a solid evidence base for Turkey in linking the notion of meritocracy with social capital and explaining its implications for long-run growth. To this end, we calibrate our theoretical model based on a combination of theoretical restrictions and empirical observations. Indeed, a calibration exercise is important for two reasons: First, it allows us to show if the model is stable under different parameter configurations. Second, it also facilitates discussions on the role of potential public policies in long-run growth. In particular, we conduct several policy experiments: an increase in the

share of public spending on social capital building activities and on infrastructure investment, and a decrease in the share of non-meritocractic political elites. Each increase in the share of public spending is financed by a concomitant cut in other items or in education.

The remainder of the paper has been organized in the following way. Chapter 2 provides a brief overview of the recruitment process in the public sector in Turkey. Chapter 3 presents our two-period OLG model. Chapter 4 provides a calibration exercise for our country choice, Turkey, whereas Chapter 5 focuses on policy experiments. Finally, Chapter 6 concludes.

2 Brief Overview on the Recruitment Process in Turkey's Public Sector

The recruitment process in Turkey's public sector is rather complex. Candidates who would like to work in the public sector have to take a central exam for selecting public officials called "KPSS" by the Student Selection and Placement Centre, OSYM. This centre is responsible for running a considerable number of exams that can respond to the needs of different public institutions in Turkey. In this regard, millions of candidates from different disciplines sit for this exam each year. The exam is designed for three categories: KPSS for candidates under category A and B, and KPSS for teacher candidates.

Job positions under category A is also known as "prestigious government jobs", such as governor operating on a district level, auditor, and expert etc. However, there is a multi-stage recruitment process for canditates under this category. The exam is held in four sessions on different dates every year. In the first session, all the candidates have to take a general test, which measures skills in three areas: verbal reasoning, quantitative reasoning, and critical thinking. In other three sessions, canditates are responsible for discipline-specific questions on Public Administration-

International Relations-Labour Economics and Industrial Relations (1^{st} Session), Law-Economics-Public Finance (2^{nd} Session), and Business Administration-Accounting-Statistics (3^{rd} Session). A number of test scores are calculated for each canditate (each test score has a different weight of examination components) because each government body is interested in a different test score for the recruitment. If candidates achieve a specific score from KPSS set by government bodies they are interested in, they can then take written and/or oral exams that each government body runs in its own right. These exams are run in different ways: only written, only oral or both written and oral exam; the recruitment process changes from one government body to another. For example, in the case of a two-stage recruitment process where candidates are required to take both written and oral exam, candidates are invited for an oral exam only if they are successful in passing a written exam and then shortlisted. After the oral exam, assessment results for canditates are released based on their overall performance in both written and oral exam (with each examination component having an unequal weight).

In Turkey, teachers are recruited on a permanent or contract basis. Their recruitment process is similar to the one for candidates under Category A but KPSS is held only in three sessions. In the first session, all the candidates also have to take a general test. In the second and third sessions, candidates are responsible for discipline-specific questions. However, although there is no oral exam for teacher candidates interested in a permanent position, contract candidates are invited for an oral exam if they achieve a specific score set by the Turkish Ministry of National Education.

KPSS under category B is designed for all the professions but those defined for the one under category A, such as psychologist, nurse/midwife, engineer, vet, architect etc. All undergrad or soon-to-be undergrad canditates can sit for KPSS under category B. The exam is held in even-numbered years. However, while graduate

or soon-to-be graduate candidates can attend the exam only in odd-numbered years, high school graduates or canditates with a two-year associate's degree can also attend the exam in even-numbered years.

According to the March 2023 statistics by the Presidency of Strategy and Budget ("Strateji ve Butce Baskanligi"), around 5 million people are employed in the public sector, 3 million of these people hold a permanent position.[1] Despite a limited number of permanent positions available in the public sector, the number of candidates sitting for KPSS to secure a permanent position in the public sector is still increasing with each passing year, which therefore creates an incentive for candidates to resort to political authorities or political elites to be considered for the positions they apply for. However, this leads to social unrest and distorts the generalized trust, which in turn reduces the stock of social capital in the society and hinders economic growth, as noted earlier.

3 The Model

In this paper, we develop a two-period (adulthood and old age) Overlapping Generations (OLG) model of endogenous growth. We further discuss the model's properties in the following sections: households, utility function and budget constraint, human capital, political capital, social capital, meritocracy degree, firms, government, and finally market clearing conditions. Figure 1 summarizes our theoretical framework in a diagram.

3.1 Households

3.1.1 Social Classes

Social class is defined under two categories: ordinary people and political elites. Individuals are born either ordinary or political elites and they cannot change their

[1] Available at https://www.sbb.gov.tr/kamu-istihdami/ (accessed on June 15^{th}, 2023).

social classes, implying that there is no social mobility within the society (Perez-Alvarez and Strulik, 2021). There are two distinct categories among political elites based on their attitudes towards abuse of power: meritocratic political elites and non-meritocratic political elites. However, this attitude is innate, that is, one's attitude towards abuse of power is not determined by the previous generation. At the beginning of adulthood, his attitude is determined by his choice. However, he cannot change his attitude after he has decided. Therefore, the size of social classes in the society is constant over time. Besides, there is homogeneity within the subgroups in the society.

Abuse of power occurs in the form of nepotism in Turkey, as discussed in the previous section. In this sense, political elites can be either meritocratic or non-meritocratic depending on whether or not they practice nepotism. Meritocratic political elites have no intention to abuse power but rather believe in talent and ability. Indeed, "meritocracy manifests the unequal distribution of political influence" (Bellows, 2009, p.27).

Therefore, in our model χ refers to the share of political elites in the society and therefore $(1-\chi)$ is the share of ordinary people where $0 \leq \chi < 1$. The share of non-meritocratic political elites is θ and therefore the share of meritocratic political elites is $(1-\theta)$. Population is constant at $\overline{N}$. As a result, the number of political elites is $\overline{N}\chi$ and the number of non-meritocratic political elites and meritocratic political elites is $\overline{N}\chi\theta$ and $\overline{N}\chi(1-\theta)$, respectively.

3.1.2 Time Allocation

Each adult is endowed with one unit of time in each period and allocates his time between education, ε^E, market work, ε^W, personal care (and meal), ε^P, household chores, ε^H, social capital building activities, ε^S, and other activities, including watching TV, listening music, and transportation etc. ε^O. In particular, adults allocate ε^S unit of time to social capital building activities, such as voluntary work, meetings,

social life, entertainment, sports, and outdoor activities. However, such amount of time has important implications especially for non-meritocratic political elites because they can increase their political capital and therefore political influence. As a result, the equation for time constraint is as follows:

$$1 = \varepsilon^E + \varepsilon^W + \varepsilon^P + \varepsilon^H + \varepsilon^S + \varepsilon^O. \tag{1}$$

3.2 Utility Function and Budget Constraint

The individual's discounted utility function is given as follows:

$$U_t^h = \eta_C \ln c_t^{t,h} + \frac{\ln c_{t+1}^{t,h}}{1+\rho}, \tag{2}$$

where U_t^h is individual h's utility function. $c_t^{t,h}$ ($c_{t+1}^{t,h}$) consumption of individual h at period t $(t+1)$. $\eta_C > 0$ is the individual's relative preference parameter for current consumption and $\rho > 0$ is the discount rate.

Given that there are neither debts nor bequests between generations, the individuals' period-specific budget constraints for periods t and $t+1$ are given below:

$$c_t^{t,h} + s_t^h = (1-\tau)(H_t^h \varepsilon^W w_t), \tag{3}$$

$$c_{t+1}^{t,h} = (1 + r_{t+1})\, s_t^h, \tag{4}$$

where H_t^h is individual h's human capital, s_t^h savings rate, $\tau \in (0,1)$ constant tax rate, w_t is the economy-wide wage rate, r_{t+1} is the rate of return on holding assets between periods t and $t+1$, and ε^W the amount of time allocated to market work, as noted earlier.

3.3 Human Capital

In line with the evidence (e.g. Agénor and Dinh, 2015; Alpaslan, 2017; Alpaslan and Ali, 2017; and Alpaslan and Yildirim, 2020), the stock of human capital at

the beginning of period $t+1$ is determined by the average government spending on education per capita and the human capital stock of the previous generation. Also, as in Agénor and Dinh (2015), it depends on a fixed amount of time allocated to education. Therefore, human capital accumulation takes the following form:

$$H_{t+1} = (\frac{G_t^H}{\overline{N}})^{\lambda_1} H_t^{1-\lambda_1} \left(\varepsilon^E\right)^{\lambda_E}, \tag{5}$$

where $\lambda_1 \in (0,1)$ and $\lambda_E > 0$.

3.4 Political Capital

In reviewing the literature, political capital is considered a type of linking social capital (Woolcock and Narayan, 2000; Szreter and Woolcock, 2004; Booth and Richard, 2012; George and Ponattu, 2018). Indeed, similar to social capital, political capital also accumulates in relational ties (Nee and Opper, 2010). Political elites value their political relations (Fafchamps and Labonne, 2020) because these relations allow them to exert a political influence (Ehrlich and Lui, 1999). However, political elites can pass on political connections they have to their offspring (Dal Bo et al., 2009; Kramarz and Skans, 2014; Asako et al., 2015; De la Croix and Goni, 2021) because agents can perform their relational activities through either pre-existing or new social ties (Bilancini and D'Alessandro, 2012). In other words, political capital is inherited across generations (Jessop, 2002; George and Ponattu, 2018; Utami and Cramer, 2020). As a result, the stock of political capital at the beginning of period $t+1$ depends on the political capital stock of the previous generation. Besides, individuals with higher levels of human capital show more interest in political issues (Hadjar and Becker, 2006). Finally, non-meritocratic political elites who intend to misuse a position of power allocate their time to expanding and deepening their connections in order to increase their political influence. Therefore, time allocation to social capital building activities is also a determinant of the political capital stock.

As a result, the accumulation of political capital takes the following form:

$$P_{t+1} = P_t^{\Omega} H_t^{1-\Omega} (\varepsilon^S)^{\Omega_S}, \tag{6}$$

where $\Omega \in (0, 1)$ and $\Omega_S > 0$.

3.5 Social Capital

The stock of social capital at the beginning of period $t + 1$ is a function of several variables. First, recent studies (e.g., Agénor and Dinh, 2015; Alpaslan, 2017; Alpaslan and Yildirim, 2020; Alpaslan and Burchell, 2022) show that it is determined by government expenditure per capita on social capital building activities. This type of government expenditure can include any policy and programme interventions that can, for instance, improve institutional trust in political institutions (Alpaslan, 2017).

Second, similar to human capital, it takes time for social capital to accumulate (Alpaslan and Burchell, 2022); therefore, social capital depends on the stock of social capital of the previous generation (Alpaslan, 2017). However, its level depends on the magnitude of meritocracy degree in the society because while higher meritocracy degree improves citizens' trust in government and promotes social capital, lower meritocracy degree distorts the generalized trust (Woolridge, 2023) and therefore harms social capital in the society. On the contrary, lower meritocracy implies higher nepotism, which is a form of corruption, and it is believed that corruption undermines trust (Anderson and Tverdova, 2003; Morris and Klesner, 2010; Burhan et al. 2020) and social capital (Banerjee, 2016). "The interplay between corruption aversion and social capital increases in the presence of citizens' trust towards institutions, institutional trust, and confidence in the rule of law" (Andriani, 2021, 179).

Third, human capital is also complementary to social capital accumulation (Alpaslan, 2017; Alpaslan and Yildirim, 2020). Indeed, individuals with high levels of human capital will have more incentive to socialise and build social ties.

Fourth, access to public infrastructure is important for promoting social capital accumulation this is because telecommunication technologies and systems help individuals expand their social networks (Agénor and Dinh, 2015). Therefore, the stock of social capital is also determined by the public-private capital ratio.

Finally, social capital accumulates as a result of the time allocated to social capital building activities, such as voluntary work, meetings, social life, entertainment, sports, and outdoor activities, as noted earlier (Coleman, 1988; Bilancini and D'Alessandro, 2012; Coppier et. al, 2019).

As a result, the stock of social capital at the beginning of period $t+1$ is as follows:

$$K_{t+1}^{S} = (\frac{G_t^S}{\overline{N}})^{\gamma_1} \left(m_t^{\gamma_m} K_t^S\right)^{\gamma_2} H_t^{1-\gamma_1-\gamma_2} \left(k_t^I\right)^{\gamma_3} (\varepsilon^S)^{\gamma_S}, \tag{7}$$

where m_t is a meritocracy degree in the society, $\gamma_1, \gamma_2, \gamma_3 \in (0,1)$, and $\gamma_m, \gamma_S > 0$.

3.6 Meritocracy Degree

As discussed earlier, in our study political elites are categorized according to their attitudes towards abuse of power: meritocratic political elites and non-meritocratic political elites. Political elites can be either meritocratic or non-meritocratic depending on whether or not they practice nepotism. Meritocratic political elites have no intention to abuse power but rather believe in talent and ability. In this regard, human capital plays a crucial role in "just meritocracy that would undermine inherited class and status structures" (Jessop, 2002, p. 162) and in merit-based decisions (Hickman, 2021). However, the marginal benefit of an increase in the existing stock of human capital becomes less relevant for meritocracy as the level of political capital increases because political elites take an advantage of their political networks, which in turn undermines meritocracy in the society. Besides, as noted earlier, the number of non-meritocratic political elites corresponds to $\overline{N}\chi\theta$ in our model. However, the higher number of non-meritocratic political elites in the society, the lower meritocracy degree is. Indeed, "the practice of favoritism is a problem of collective action

at the group level" (Bramoulle and Goyal, 2016, p.20). Therefore, the number of non-meritocratic political elites in the society is negatively associated with the meritocracy degree. As a result, the meritocracy degree is measured in the following way:

$$m_t = (\frac{H_t}{P_t})^{\phi_1}(\overline{N}\chi\theta)^{-\phi_2}, \tag{8}$$

where ϕ_1 and $\phi_2 \in (0,1)$.

3.7 Firms

As in Agénor (2011), firms are assumed to produce a single nonstorable good; to this end, they use effective labour, $H_t\varepsilon^W N_t^i$, private capital, K_t^P, and public infrastructure, K_t^I, which is, however, proportional to the aggregate private capital stock due to the congestion effect. Following the studies of Guiso et al. (2010) and Alpaslan (2017), the stock of social capital, K_t^S, is also considered in the production function. Assuming constant returns to scale in private inputs, the production function of individual firm i takes the following form:

$$Y_t^i = (\frac{K_t^I}{K_t^P})^{\alpha}(K_t^S)^{\beta}\left(H_t\varepsilon^W N_t^i\right)^{\beta}(K_t^{P,i})^{1-2\beta}, \tag{9}$$

where $\alpha, \beta \in (0,1)$ is the elasticity with respect to the public-private capital ratio and the elasticity with respect to social capital stock, respectively.

It is assumed that all firms are idential so in a symmetric equilibrium $K_t^{P,i} = K_t^P, \forall i$, and as a result of the labour market equilibrium condition, $\int_0^1 N_t^i di = \overline{N}$, and that their number is normalised to one. Given that the aggregate output must be linear in private capital, Equation (9) becomes as follows:

$$Y_t = \int_0^1 Y_t^i di = (k_t^I)^{\alpha}(\varepsilon^W\overline{N})^{\beta}(k_t^S)^{\beta}h_t^{\beta}K_t^P, \tag{10}$$

where $k_t^I = K_t^I/K_t^P$, $k_t^S = K_t^S/K_t^P$, and $h_t = H_t/K_t^P$.

3.8 Government

The government cannot borrow and therefore must run a balanced budget. The government imposes an income tax at the rate τ on adult workers to finance its expenditures on human capital, G_t^H, social capital building activities, G_t^S, infrastructure investment, G_t^I, as well as on other items, G_t^O that are assumed not to be productive in the model:

$$G_t = \sum G_t^k = \tau \overline{N} H_t \varepsilon^W w_t, \tag{11}$$

or alternatively

$$G_t^k = \upsilon_k \tau \overline{N} H_t \varepsilon^W w_t, \tag{12}$$

where $k = H, S, I, O$, $\upsilon_k \in (0, 1)$ for all k.

Equation (11) and Equation (12) yield the following equation:

$$\upsilon_H + \upsilon_S + \upsilon_I + \upsilon_O = 1. \tag{13}$$

It is assumed that there is full depreciation in public capital. The public capital in infrastructure is as follows:

$$K_{t+1}^I = G_t^I. \tag{14}$$

3.9 Market Clearing Conditions

The asset market clearing condition requires that the private capital stock at period $t+1$ is equal to savings at period t by adult workers.

$$K_{t+1}^P = \overline{N} s_t. \tag{15}$$

3.10 Balanced Growth Equilibrium

A competitive equilibrium in this model is a sequence of allocations $\left\{c_t^{t,h}, c_{t+1}^{t,h}, s_t^{t,h}\right\}_{t=0}^{\infty}$, physical capital stock $\left\{K_t^P\right\}_{t=0}^{\infty}$, public capital stock $\left\{K_t^I\right\}_{t=0}^{\infty}$, human capital stock $\{H_t\}_{t=0}^{\infty}$, political capital stock $\{P_t\}_{t=0}^{\infty}$, social capital stock $\left\{K_t^S\right\}_{t=0}^{\infty}$, factor prices

$\{w_t, r_t\}_{t=0}^{\infty}$, a constant tax rate, fixed friction of time allocations, constant shares of public spending such that given initial stocks $K_0^P > 0$, $K_0^I > 0, H_0 > 0, P_0 > 0, K_0^S > 0$, individuals maximise their utility function, firms maximise profits, markets are clear and the government budget is balanced. In equilibrium, $H_t = h_t\,, P_t = p_t$, and $K_t^S = k_t^S$.

A balanced growth equilibrium is a competitive equilibrium in which c_t^t, c_{t+1}^t, s_t, $K_t^P, K_t^I, H_t, P_t, K_t^S$ and Y_t grow at the constant rate $1+\gamma$, the rate of return on private capital r_t, and the economy-wide private sector wage rate, w_t are constant.

As shown in the Appendix, the solution of the model yields that

$$k_{t+1}^I = J = \frac{\upsilon_I \tau}{\sigma\,(1-\tau)}, \forall t \tag{16}$$

where

$$\sigma = \frac{1}{1+\eta_C\,(1+\rho)} < 1. \tag{17}$$

The steady-state values of $\widetilde{h}$, $\widetilde{p}$ and $\widetilde{k^S}$ are as follows:[2]

$$\widetilde{h} = (\frac{\psi_4}{\psi_1})^{\mu_1}(\widetilde{k^S})^{\mu_2}(\widetilde{k}^I)^{\mu_3}, \tag{18}$$

$$\widetilde{p} = (\widetilde{k^S})^{\mu_4}(\widetilde{h})^{\mu_5}(\widetilde{k}^I)^{\mu_6}\psi_2^{1/(1-\Omega)}, \tag{19}$$

$$\widetilde{k^S} = (\frac{\psi_3}{\psi_1})^{\mu_7}(\widetilde{p})^{\mu_8}(\widetilde{h})^{\mu_9}(\widetilde{k}^I)^{\mu_{10}}, \tag{20}$$

where

$$\psi_1 = (1-\tau)\,\sigma\beta(\varepsilon^W\overline{N})^{\beta}, \tag{21}$$

$$\psi_2 = (\varepsilon^S)^{\Omega_S}\psi_1^{-1}, \tag{22}$$

$$\psi_3 = [\upsilon_S\tau\beta(\varepsilon^W)^{\beta}(\overline{N})^{\beta-1}]^{\gamma_1}(\varepsilon^S)^{\gamma_S}\overline{N}\chi\theta^{-\varphi_2\gamma_m\gamma_2}, \tag{23}$$

$$\psi_4 = [\upsilon_H\tau\beta(\varepsilon^W\overline{N})^{\beta}]^{\lambda_1}\left(\varepsilon^E\right)^{\lambda_E}, \tag{24}$$

[2]Please note that superscript $\sim$ refers to the steady-state values of our variables.

$$\psi_5 = (\varepsilon^W \overline{N})^\beta (1-\tau)\sigma\beta, \tag{25}$$

$$\mu_1 = \frac{1}{\lambda_1 + \beta(1-\lambda_1)}, \tag{26}$$

$$\mu_2 = \frac{\beta(\lambda_1 - 1)}{\lambda_1 + \beta(1-\lambda_1)}, \tag{27}$$

$$\mu_3 = \frac{\alpha(\lambda_1 - 1)}{\lambda_1 + \beta(1-\lambda_1)}, \tag{28}$$

$$\mu_4 = \frac{-\beta}{1-\Omega}, \tag{29}$$

$$\mu_5 = \frac{1-\Omega-\beta}{1-\Omega}, \tag{30}$$

$$\mu_6 = \frac{-\alpha}{1-\Omega}, \tag{31}$$

$$\mu_7 = \frac{1}{1-\gamma_2 + \beta(1-\gamma_1)}, \tag{32}$$

$$\mu_8 = \frac{-\varphi_1\gamma_m\gamma_2}{1-\gamma_2 + \beta(1-\gamma_1)}, \tag{33}$$

$$\mu_9 = \frac{(\gamma_1 - 1)(\beta - 1) + \gamma_2(\varphi_1\gamma_m - 1)}{1-\gamma_2 + \beta(1-\gamma_1)}, \tag{34}$$

$$\mu_{10} = \frac{\alpha(\gamma_1 - 1) + \gamma_3}{1-\gamma_2 + \beta(1-\gamma_1)}. \tag{35}$$

The steady-state growth rate of the economy is given as:

$$1 + \gamma = (\widetilde{k^I})^\alpha (\varepsilon^W \overline{N})^\beta (\widetilde{k^S})^\beta (\widetilde{h})^\beta \, (1-\tau)\, \sigma\beta, \tag{36}$$

$$1 + \gamma = \psi_5 (\widetilde{k^S})^\beta (\widetilde{h})^\beta (\widetilde{k^I})^\alpha. \tag{37}$$

4 Calibration Exercise

In order to discuss the effects of potential public policies on long-run growth, a calibration exercise is conducted for Turkey.

For households, the annual discount rate, $\rho = 0.04$ has long been reported in the literature (e.g., Agénor and Dinh, 2015; Agénor and Alpaslan, 2018). An OLG framework in which a period is set as 25 years yields an intergenerational discount rate of $\rho = 1.04^{25} - 1 = 1.666$ and an intergenerational discount factor of $1/2.666 = 0.375$. According to the latest statistics by the Presidency of Strategy and Budget[3], the family's propensity to save, σ, for Turkey is equal to 17.6 percent for the period 1975-2015. Using the intergenerational discount rate and family's propensity to save $\eta_C = (\sigma^{-1} - 1) / (1 + \rho)$ can be calibrated at 1.98.

Following the study of Chatterjee and Pal (2021), if a household member is a member of a political party, then this member is considered a political elite. In this regard, according to the latest statistics by the Supreme Court of Appeals Prosecutor's Office ("Yargitay Cumhuriyet Bassavciliği"), the total number of the member of the Justice and Development Party ("Adalet ve Kalkinma Partisi"), the ruling party, is $11,241.230$,[4] which corresponds to $\overline{N}\chi$, the number of political elites in our model. Using the data from the address-based registration system by the Turkish Statistical Institute[5], the total population of Turkey is $85,279.553$, which corresponds to $\overline{N}$ in our model. As a result, the share of political elites in the society, χ can be calculated as follows: $11,241.230/85,279.553 = 0.13$. According to the studies of O'Neill and White (2018) and Ibsen et al. (2021), public unions that are politicized provide a basis for nepotistic cooperation. In Turkey, Confederation of Public Servants

[3] Available at www.sbb.gov.tr/ekonomik-ve-sosyal-gostergeler/#1540021349032-1be70108-294c (accessed on July 16^{th}, 2023).

[4] Available at www.yargitaycb.gov.tr/icerik/1095 (accessed on July 16^{th}, 2023).

[5] Available at https://data.tuik.gov.tr/Bulten/Index?p=The-Results-of-Address-Based-Population-Registration-System-2022-49685&dil=2 (accessed on July 16^{th}, 2023).

Trade Unions ("Memur-Sen") is known to have strong ties with the government and political elites are represented by these unions. In this regard, it is reported that the total member of Memur-Sen in 2022 is $1,035.278$.[6] Under this confederation, there are a number of trade unions, including "Egitim-Bir-Sen" and "Saglik-Sen" for members employed in the education and health sectors. The member of these unions is 396.421 and 266.908, respectively. However, the members in these professions do not go through a job interview during the recruitment process. The number of their members is therefore deducted from the total number of Memur-Sen members. As a result, it is 371.949, which corresponds to $\overline{N}\chi\theta$, the number of non-meritocratic political elites in our model. This number is divided by $\overline{N}\chi$, the number of political elites, as noted earlier. The share of non-meritocratic political elites, θ is then $371.949/11,241.230 \simeq 0.033$, which is consistent with the literature. For example, according to the study of Fafchamps and Labonne (2017), in the Philippines, 3.3 percent of individuals in close relationship with the successful candidates in the 2007 elections were employed in a managerial role, compared with only 2 percent of the population. Similarly, it is reported that 0.05 individuals who have the same family name as a judge are hired for key positions in the following 12 months after a judge is assigned to the court located in his place of birth (Brassiolo et al., 2021).

As discussed already, individuals allocate their time between personal care, market work, further education, household chores, social capital building activities, and other activities. According to the 2015 Time Use Survey by the Turkish Statistical Institute,[7] average time spent on sleeping is 8 hours 12 minutes total available time is therefore 15 hours 48 minutes or 948 minutes. In addition, the average amount of time allocated to personal care, market work, household chores, further education, and other activities is 163 minutes, 352 minutes, 94 minutes, 5

[6] Available at www.resmigazete.gov.tr/eskiler/2023/07/20230704.pdf (accessed on July 16^{th}, 2023).

[7] Available at www.data.tuik.gov.tr/Bulten/Index?p=Zaman-Kullanim-Arastirmasi-2014-2015-18627 (accessed on July 16^{th}, 2023).

minutes, and 191 minutes, respectively. And then each component of time allocation is divided by the total available time (948 minutes). As a result, $\varepsilon^P = 0.172$, $\varepsilon^W = 0.371$, $\varepsilon^H = 0.099$, $\varepsilon^E = 0.005$, and $\varepsilon^O = 0.201$. Time allocation for social capital building activities is then residually obtained from Equation (1): $\varepsilon^S = 1 - 0.172 - 0.371 - 0.099 - 0.005 - 0.201 = 0.152$.

The effective tax rate on wages, τ, is calculated as follows. According to the latest statistics of the OECD,[8] the average rate of social security contributions of employees as a percentage of gross wage earnings is 0.15 for the 2000-2022 period. This value is divided by the average share of labour income for Turkey, 0.45, estimated by Sevinc and Cakir (2021). Therefore, the effective tax rate is $\tau = 0.15/0.45 \cong 0.33$. The shares of government spending on human capital, social capital building activities, infrastructure, and other items for Turkey are calculated as follows. Using the General Government Budget Expenditure database by the Turkish Ministry of Treasury and Finance,[9] the average share of total government expenditure in GDP is 0.338 over the period 2012-2021. Also, the average share of government expenditure on education in GDP is 0.035. This number is then divided by the share of total government expenditure as a percentage of GDP, 0.338. As a result, $\upsilon_H = 0.035/0.338 = 0.104$. The same methodology applies to calculating the average share of government spending on social capital building activities[10] and infrastructure investment. Therefore, $\upsilon_S = 0.007/0.338 = 0.02$ and $\upsilon_I = 0.012/0.338 = 0.035$. The share of government expenditure on ither items in GDP is residually calculated from Equation (15): $\upsilon_O = 1 - 0.104 - 0.02 - 0.035 = 0.841$.

In the human capital sector, the elasticity with respect to government spending

[8] Available at https://stats.oecd.org/Index.aspx?DataSetCode=REV (accessed on July 16^{th}, 2023).

[9] Available at https://www.hmb.gov.tr/muhasebat-genel-mudurlugu-istatistikleri (accessed on July 16^{th}, 2023).

[10] The components of this type of government spending include spending on recreation, culture, and religion services that could enhance social capital.

on education services per capita, $\lambda_1 = 0.45$ is close to the value reported by De la Croix and Vander Donckt (2010). In line with the evidence in the study of Agénor and Dinh (2015), the elasticity with respect to time allocation for further education λ_E is 0.3 that is also very close to the value, 0.4 reported by Agénor and Alpaslan (2013).

In the social capital sector, as in Agénor and Dinh (2015) and Alpaslan (2017), the elasticity with respect to government spending on social capital building activities, γ_1, is set equal to 0.3. The elasticity with respect to the stock of social capital of the previous generation, γ_2 and the elasticity with respect to public-private capital ratio, γ_3 are both set at 0.3 (Agénor and Dinh, 2015) while the elasticity with respect to the time allocation for social capital building activities, γ_S is set at 0.1 (Agénor and Dinh, 2015). There is no empirical evidence in the literature on the elasticity with respect to the meritocracy degree, γ_m so its initial value is set equal to 0.1 to begin with. A sensitivity analysis with respect to γ_m is also reported later on.

In the political capital sector, there is no empirical evidence in the literature on the elasticities with respect to the stock of social capital, Ω, and time allocation for social capital building activities, γ_S. Therefore, they are both set equal to 0.1 to begin with as well.

As noted earlier, this paper is the first study that provides a measure of the meritocracy degree to determine the extent to which there is an incidence of nepotism in the society. Therefore, there is no evidence in the literature on the elasticities with respect to political-social capital ratio, ϕ_1, and the number of non-meritocractic political elites in the society, ϕ_2. Accordingly, they are both set equal to a low value of 0.1 initially. However, a sensitivity analysis with respect to these elasticities are also reported.

In the private sector, the elasticity of production of final goods with respect to public-private capital ratio, α, is set at 0.17 (Bom and Ligthart, 2014; Alpaslan and

Ali, 2017) that is very close to the value, 0.15 reported by studies in the literature (e.g. Agénor et al. 2014; Agénor and Alpaslan 2018). The elasticity with respect to effective labour, β, is set at 0.35 in consistent with the literature (Agénor, 2011; Agénor et al., 2014; Alpaslan, 2017; Agénor and Alpaslan 2018).

Using the WDI database of the World Bank, the annual GDP growth rate for Turkey is 4.8 percent for the 1961-2022 period.[11]

All the parameter values for our calibration exercise are summarized in Table 1. When the model is calibrated based on theoretical restrictions and empirical observation, it satisfies the saddle-path stability condition. Figures 2-6 show that social capital-private capital ratio, k_t^S, human capital-private capital ratio, h_t, political capital-private capital ratio, p_t, meritocracy degree, m_t, and growth rate of final output, $1+\gamma$, converge to a steady-state value in the baseline case.

5 Policy Experiments

A series of policy experiments are conducted to observe to what extent potential public policies can affect economic growth. In each table, the variables of interest to be reported are public-private capital ratio, social capital-private capital ratio, human capital-private capital ratio, political capital-private capital ratio, meritocracy degree, and growth rate of final output, respectively.

5.1 Change in the Share of Government Spending on Social Capital Building Activities

The first policy experiment is to increase government expenditure on social capital building activities as a share of GDP by a one-percentage point, from 0.7 percent to 1.7 percent. In other words, the share of government expenditure on social capital

[11] Available at https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=TR (accessed on July 16^{th}, 2023).

building activities, υ_S, increases from 2 percent to $0.017/0.338 = 5$ percent. This increase is a budget neutral and is financed by a cut in other items, which are not directly productive in the model ($d\upsilon_S + d\upsilon_O = 0$). The results are presented in Panel A of Table 2.

In response to an increase in this type of government expenditure, social capital-private capital ratio increases by 88.5 percentage points. However, both human capital-private capital ratio and political capital-private capital ratio fall. This fall in both ratios can be explained as follows: social capital has an indirect, positive impact on human capital so stocks of human capital and private capital increase but the private capital stock increases by more than the human capital stock. As a result, human capital-private capital ratio falls. In a similar manner, while human capital has a direct, positive impact on political capital, social capital has an indirect effect. Although social capital-private capital ratio increases, human capital-private capital ratio falls, as noted earlier so the increase in social capital-private capital ratio cannot compensate the fall in human capital-private capital ratio. As a result, political capital-private capital ratio falls. As noted earlier in the model part, the meritocracy degree is determined by the stock of human capital and the number of non-meritocratic political elites in the society; however, the extent to which human capital can affect the meritocracy degree depends on the level of political capital; the meritocracy degree increases by 0.89 percentage points because human capital increases and the increase in human capital is conducive to political capital, as noted earlier. At the same time, social capital has an indirect, positive impact on political capital. In other words, an increase both in human capital and social capital contributes to political capital. Therefore, political capital increases as well. This increase in the meritocracy degree in turn increases social capital-private capital ratio by more because higher meritocracy degree promotes social capital. As a result, the growth rate increases by 0.34 percentage points.

This policy experiment is conducted under alternative values of γ_1, γ_2, γ_m, and γ_2 combined with γ_m. Starting with the elasticity of social capital with respect to government spending on social capital building activities, γ_1, it increases from its initial value, 0.3, to two higher values, 0.5 and 0.7, respectively. When $\gamma_1 = 0.5$, although the meritocracy degree increases by 1.61 percentage points, both human capital-private capital ratio and political capital-private ratio falls significantly. As a result, the magnitude of the increase in social capital-private capital ratio is limited. However, the growth rate increases by 0.46 percentage points. When $\gamma_1 = 0.7$, the effects on variables of interest become more significant and the growth rate increases by 0.49 percentage points. Two higher values of the elasticity of social capital with respect to the stock of social capital, γ_2, are also reported. For example, when γ_2 increases from 0.3 to 0.5, the increase in the meritocracy degree leads to a significant increase in the social capital-private capital ratio; it increases by 181.26 percentage points and the growth rate increases by 0.51 percentage points. The results are magnified when $\gamma_2 = 0.7$. When $\gamma_m = 0.3$ or 0.9, a higher share of government spending on social capital building activities has no discernible effect on long-run growth compared to the benchmark case; however, it has a stronger effect on the meritocracy degree and social capital-private capital ratio and therefore on the growth rate when it is combined with γ_2. For example, when the elasticity of social capital with respect to the meritocracy degree, $\gamma_m = 0.9$ is jointly considered with $\gamma_2 = 0.7$, the growth rate increases by 1.07 percentage points.

The same policy experiment is conducted but this time an increase in the share of government expenditure on social capital building activities, υ_S, is financed by a cut in another productive type of government spending, namely, education ($d\upsilon_S + d\upsilon_H = 0$). As can be seen from Panel B, in the benchmark case, due to the concomitant cut in the share of government spending on education, the trade-off effect kicks in; human capital-private capital ratio falls significantly and so does the political capital-private

capital ratio. Therefore, the meritocracy degree falls by 0.32 percentage points and the growth rate falls by 0.12 percentage points. However, when γ_2 increases from 0.3 to 0.5, despite the fall in the human capital-private capital ratio, the social capital-private capital ratio increases significantly due to the higher meritocracy degree; as a result, the net effect on growth turns out to be positive and it increases by 0.06 percentage points. When $\gamma_2 = 0.7$, the growth rate is stronger; it increases by 0.6 percentage points. However, when $\gamma_2 = 0.5$ or 0.7, the net effects on growth are lower than the case where a higher share of government spending on social capital building activities is financed by a cut in other items this is because the trade-off effect still persists. Finally, when $\gamma_m = 0.3$ or 0.9, a higher share of government spending on social capital building activities has no discernible effect on the growth rate when compared to the benchmark case but the trade-off effect is still observed due to the concomitant cut in the share of government spending on education. However, this trade-off disappears and the growth rate even turns out to be positive when $\gamma_2 = 0.5$, combined with $\gamma_m = 0.3$. The net impact on the growth rate is even stronger when $\gamma_2 = 0.7$ is jointly considered with $\gamma_m = 0.9$; it increases by 0.65 percentage points.

5.2 Change in the Share of Government Spending on Infrastructure Investment

In the second policy experiment, the share of government spending on infrastructure investment in GDP is increased by a one-percentage point, from 1.2 percent to 2.2 percent. In other words, the share of government expenditure on infrastructure, υ_I , increases from 3.6 percent to $0.022/0.338 = 6.5$ percent. This increase is a budget neutral and is financed by either a cut in other items ($d\upsilon_I + d\upsilon_O = 0$) or a cut in education ($d\upsilon_I + d\upsilon_H = 0$). The results of the first case are presented in Panel B of Table 3.

In the benchmark case, the first effect of this policy experiment is an increase

in the public-private capital ratio; it increases by 8.4 percentage points. Access to infrastructure also has an indirect, positive effect on both human and political capital so the meritocracy degree increases by 1.28 percentage points. However, the increase in private capital is greater than the increase in human and social capital. Therefore, both human capital-private capital and political capital-private capital ratios fall. Due to the better access to public infrastructure, individuals can accumulate social capital through social networks. Besides, social capital increases depending on the magnitude of the meritocracy degree. As a result, the social capital-private capital ratio also increases by 28.88 percentage points. The net effect on the growth rate is in the order of 0.49 percentage points.

We also report this policy experiment under alternative values of two key elasticities: γ_2 and γ_3. For example, when the elasticity of social capital with respect to the public-private capital ratio, γ_3, increases from its initial value, 0.3 to 0.5 and 0.7, respectively, the social capital-private capital ratio increases by 50 percent more than in the benchmark case; it increases by 43.52 and 45.26 percentage points, respectively due to the stronger meritocracy degree. As a result, the net effect on the growth rate is stronger as well; it increases by 0.59 and 0.66 percentage points when $\gamma_3 = 0.5$ and 0.7, respectively. When two higher values of the elasticity of social capital with respect to the stock of social capital, γ_2, are considered, the effect of this policy experiment on variables of interest is similar to the previous experiment.

Alternatively, when the increase in the share of government spending on infrastructure is financed by a concomitant cut in education, in the benchmark case the net effect on the growth rate is still positive albeit very low. Despite the beneficial effects of better access to infrastructure on human capital, the cut in the share of government spending on education reduces the human capital-private capital ratio, which in turn impairs the political capital-private capital ratio. And then the decrease in both ratios undermines the meritocracy degree. For example, when the

elasticity of social capital with respect to the stock of social capital, γ_2, increases from 0.3 to 0.5, the social capital-private capital ratio increases significantly not only due to the benefit of better access to infrastructure but also due to the higher meritocracy degree because the meritocracy degree also increases significantly despite the cut in the share of government spending on education. However, the trade-off effect still persists because the net impact on the growth rate is in the order of 0.18 percentage points although in the case where υ_I is financed by a cut in other items, υ_O, it is 0.63 percentage points. However, when $\gamma_2 = 0.7$, the net impact on the growth rate is stronger despite the trade-off effect; it increases by 0.6 percentage points. Finally, when the elasticity of social capital with respect to the public-private capital ratio, γ_3 increases to 0.5 or 0.7, due to the trade-off effect, the growth rate is lower than in the case where υ_I is financed by a cut in υ_O.

5.3 Change in the Share of Non-Meritocratic Political Elites

In the final policy experiment, let us assume that the share of non-meritocratic political elites in the society is reduced by 25 percent. In other words, it is reduced from 0.033 to 0.025. As can be seen from Table 4, in the benchmark case, this policy experiment has a direct, positive effect on the meritocracy degree. In particular, the meritocracy degree increases by 3.42 percentage points this is because as discussed in the model part, as the share of non-meritocratic political elites in the society decreases, the meritocracy degree increases, implying that there is an inverse relationship between the two variables. And the increase in the meritocracy degree promotes the social capital-private capital ratio, as discussed in the previous experiments; it increases by 0.24 percentage points. However, despite the benefit of higher meritocracy degree for the social capital-private capital ratio, surprisingly although the net impact on the growth rate is positive, it is negligible. In the same table, we also report three alternative values of the elasticity of the meritocracy degree with

respect to the share of non-meritocratic political elites in the society, ϕ_2. It increases from its initial value, 0.1 to 0.3, 0.5, and 0.7, respectively. As ϕ_2 increases, the meritocracy degree increases by more and so does the social capital-private capital ratio but the net impact on the growth rate is still limited.

6 Concluding Remarks

This is the first study that has provided a solid evidence base for Turkey in explaining the role of meritocracy in social capital and its implications for long-run growth within a two-period OLG framework. Besides, our paper provides a measure of the meritocracy degree to determine the extent to which there is an incidence of nepotism in the society because meritocracy is the opposite of nepotism, that is, the lower meritocracy degree, the higher nepotism is or the other way around, as noted earlier. In our model, meritocracy degree is determined by two main factors, human capital and the share of non-meritocratic political elites in the society. However, human capital is scaled by political capital because as the stock of political capital increases, the marginal benefit of an increase in the existing stock of human capital becomes less important for meritocracy. In order to discuss the role of potential public policies on long-run growth, we calibrated our theoretical model and conducted several policy experiments, such as an increase in the share of public spending on social capital building activities and infrastructure investment under two scenarios; this increase is financed by either a cut in other items or a cut in education. In the latter case, we can observe the trade-off effect. We also conducted a policy experiment associated with a decrease in the share of non-meritocractic political elites. In general, the findings of our policy experiments show that the higher meritocracy degree can promote social capital and therefore long-run growth. However, when an increase in the share of government spending on either social capital building activities or infrastructure investment is financed by a cut in education, in the benchmark case, the net impacts

on long-run growth turn out to be negative or very small due to the trade-off effect because it seems that the cut in the share of government spending on education is detrimental to growth. Surprisingly, when the share of non-meritocractic political elities in the society is reduced, the net impact on the growth rate is negligible despite the higher meritocracy degree and increased social capital. This result may be explained by the fact that although a decrease in the share of non meritocratic political elites in the society can improve the meritocracy degree and therefore promote social capital in the short term, this policy per se is not enough and therefore more structural policies are also needed for a stronger long-term growth.

Appendix

Consider first the family's optimization problem. Substituting for s_t^h from Equation (4) into Equation (3) yields the lifetime budget constraint:

$$c_t^{t,h} + \frac{c_{t+1}^{t,h}}{1 + r_{t+1}} = (1 - \tau) H_t \varepsilon^W w_t. \tag{38}$$

Individuals maximize (2) with respect to $c_t^{t,h}$, $c_{t+1}^{t,h}$, subject to (38) and $c_t^{t,h}$, $c_{t+1}^{t,h} > 0$. After taking the first-order conditions, the following equation gives the Euler equation:

$$\frac{c_{t+1}^{t,h}}{c_t^{t,h}} = \frac{1 + r_{t+1}}{\eta_C (1 + \rho)}. \tag{39}$$

Let us substitute (39) in (38),

$$c_t^{t,h} = (1 - \sigma)(1 - \tau) H_t \varepsilon^W w_t. \tag{40}$$

Equation (40) can be substituted into Equation (3) to obtain:

$$s_t^{t,h} = \sigma (1 - \tau) H_t \varepsilon^W w_t, \tag{41}$$

where σ refers to marginal propensity to save:

$$\sigma = \frac{1}{1 + \eta_C (1 + \rho)} < 1.$$

Now let us consider the dynamics in this economy. Equation (41) can be substituted into Equation (18):

$$K_{t+1}^P = \overline{N} s_t = \overline{N} \sigma (1 - \tau) H_t \varepsilon^W w_t. \tag{42}$$

Each firm i maximizes its profit, subject to (9), with respect to labour and private capital, and taking social capital as given:

$$\prod_t^i = Y_t^i - H_t \varepsilon^W w_t \overline{N} - r_t K_t^{P,i}. \tag{43}$$

Note that all firms are identical and their number is normalized to unity, $Y_t = Y_t^i$ for all i. Thus,

$$\prod_t = Y_t - H_t \varepsilon^W w_t \overline{N} - r_t K_t^P. \tag{44}$$

Taking the first-order conditions of Equation (44) with respect to w_t and r_t yields

$$w_t = \frac{\beta Y_t}{H_t \varepsilon^W \overline{N}}, \tag{45}$$

and

$$r_t = \frac{(1-2\beta)\, Y_t}{K_t^P}. \tag{46}$$

Substituting Equation (45) into Equation (42) yields

$$K_{t+1}^P = \sigma\,(1-\tau)\,\beta Y_t. \tag{47}$$

Now let us rewrite Equation (10) as follows:

$$Y_t = (k_t^I)^\alpha (\varepsilon^W \overline{N})^\beta (k_t^S)^\beta h_t^\beta K_t^P. \tag{48}$$

Now to study the dynamics of K_t^P, let us substitute Equation (48) into Equation (47):

$$K_{t+1}^P = \sigma\,(1-\tau)\,\beta (k_t^I)^\alpha (\varepsilon^W \overline{N})^\beta (k_t^S)^\beta h_t^\beta K_t^P, \tag{49}$$

which can be re-arranged to give:

$$\frac{K_{t+1}^P}{K_t^P} = \sigma\,(1-\tau)\,\beta (k_t^I)^\alpha (\varepsilon^W \overline{N})^\beta (k_t^S)^\beta h_t^\beta. \tag{50}$$

And then Equation (50) can be rewritten as follows:

$$\frac{K_{t+1}^P}{K_t^P} = \psi_1 (k_t^I)^\alpha (k_t^S)^\beta h_t^\beta, \tag{51}$$

where

$$\psi_1 = (1-\tau)\,\sigma\beta (\varepsilon^W \overline{N})^\beta. \tag{52}$$

Equation (12) can be substituted into Equation (14) to obtain:

$$K_{t+1}^{I} = \upsilon_I \tau \overline{N} H_t \varepsilon^W w_t. \tag{53}$$

Equation (53) can be divided by Equation (42) to obtain the public-private capital ratio:

$$k_{t+1}^{I} = \frac{K_{t+1}^{I}}{K_{t+1}^{P}} = \frac{\upsilon_I \tau \overline{N} H_t \varepsilon^W w_t}{\overline{N} \sigma (1-\tau) H_t \varepsilon^W w_t} = \frac{\upsilon_I \tau}{\sigma (1-\tau)} = J, \tag{54}$$

which is time invariant and constant over time.

To study the dynamics of human capital, let us substitute Equation (14) into Equation (5) first:

$$H_{t+1} = (\frac{\upsilon_H \tau \overline{N} H_t \varepsilon^W w_t}{\overline{N}})^{\lambda_1} H_t^{1-\lambda_1} (\varepsilon^E)^{\lambda_E}. \tag{55}$$

Substituting Equation (45) into Equation (55) gives

$$H_{t+1} = (\frac{\upsilon_H \tau \beta Y_t}{\overline{N}})^{\lambda_1} H_t^{1-\lambda_1} (\varepsilon^E)^{\lambda_E}. \tag{56}$$

And then, Equation (48) can be substituted into Equation (56) to obtain:

$$H_{t+1} = [\frac{\upsilon_H \tau \beta \left(k_t^I\right)^{\alpha} \left(\varepsilon^W \overline{N}\right)^{\beta} (k_t^S)^{\beta} h_t^{\beta} K_t^P}{\overline{N}}]^{\lambda_1} H_t^{1-\lambda_1} (\varepsilon^E)^{\lambda_E}. \tag{57}$$

Finally, Equation (57) can be rewritten as follows:

$$H_{t+1} = \psi_4 (k_t^S)^{\beta\lambda_1} h_t^{\beta\lambda_1} \left(K_t^P\right)^{\lambda_1} H_t^{1-\lambda_1} \left(k_t^I\right)^{\alpha\lambda_1}, \tag{58}$$

where

$$\psi_4 = [\upsilon_H \tau \beta \left(\varepsilon^W\right)^{\beta} \overline{N}^{\beta-1}]^{\lambda_1} (\varepsilon^E)^{\lambda_E}. \tag{59}$$

Dividing Equation (58) by Equation (51) yields the dynamics of the human capital-private capital ratio:

$$h_{t+1} = \frac{\psi_4}{\psi_1} (k_t^S)^{\beta\lambda_1-\beta} h_t^{\beta\lambda_1+1-\lambda_1-\beta} \left(k_t^I\right)^{\alpha\lambda_1-\alpha}. \tag{60}$$

To study the dynamics of political capital, combining Equations (6) and (51) gives:

$$\frac{P_{t+1}}{K_{t+1}^P} = p_{t+1} = \frac{P_t^{\Omega} H_t^{1-\Omega} (\varepsilon^S)^{\Omega_S}}{\psi_1 (k_t^I)^{\alpha} (k_t^S)^{\beta} h_t^{\beta} K_t^P}, \tag{61}$$

which can be rearranged to obtain:

$$p_{t+1} = p_t^{\Omega} h_t^{1-\Omega-\beta} (k_t^S)^{-\beta} (k_t^I)^{-\alpha} \psi_2, \tag{62}$$

where

$$\psi_2 = (\varepsilon^S)^{\Omega_S} \psi_1^{-1}. \tag{63}$$

To study the dynamics of social capital, let us substitute Equation (14) into Equation (7) first:

$$K_{t+1}^S = (\frac{\upsilon_S \tau \overline{N} H_t \varepsilon^W w_t}{\overline{N}})^{\gamma_1} \left(m_t^{\gamma_m} K_t^S\right)^{\gamma_2} H_t^{1-\gamma_1-\gamma_2} (k_t^I)^{\gamma_3} (\varepsilon^S)^{\gamma_S}. \tag{64}$$

Equation (45) can then be substituted into Equation (64):

$$K_{t+1}^S = (\frac{\upsilon_S \tau \beta Y_t}{\overline{N}})^{\gamma_1} \left(m_t^{\gamma_m} K_t^S\right)^{\gamma_2} H_t^{1-\gamma_1-\gamma_2} (k_t^I)^{\gamma_3} (\varepsilon^S)^{\gamma_S}. \tag{65}$$

And then, Equation (48) can be substituted into Equation (65) to give:

$$K_{t+1}^S = [\frac{\upsilon_S \tau \beta \left(k_t^I\right)^{\alpha} \left(\varepsilon^W \overline{N}\right)^{\beta} (k_t^S)^{\beta} h_t^{\beta} K_t^P}{\overline{N}}]^{\gamma_1} \left(m_t^{\gamma_m} K_t^S\right)^{\gamma_2} H_t^{1-\gamma_1-\gamma_2} (k_t^I)^{\gamma_3} (\varepsilon^S)^{\gamma_S}. \tag{66}$$

Finally, Equation (8) can be substituted into Equation (66):

$$K_{t+1}^S = \psi_3 [(k_t^S)^{\beta} h_t^{\beta}]^{\gamma_1} (k_t^S)^{\gamma_2} h_t^{\varphi_1 \gamma_m \gamma_2 + 1 - \gamma_1 - \gamma_2} p_t^{-\varphi_1 \gamma_m \gamma_2} (k_t^I)^{\alpha\gamma_1 + \gamma_3} K_t^P, \tag{67}$$

where

$$\psi_3 = [\upsilon_S \tau \beta \left(\varepsilon^W\right)^{\beta} \overline{N}^{\beta-1}]^{\gamma_1} (\varepsilon^S)^{\gamma_S} \left(\overline{N} \chi \theta\right)^{-\varphi_2 \gamma_m \gamma_2}. \tag{68}$$

Dividing Equation (67) by Equation (51) yields the dynamics of the social capital-private capital ratio:

$$k_{t+1}^S = \frac{\psi_3}{\psi_1} (k_t^S)^{\beta\gamma_1 + \gamma_2 - \beta} p_t^{-\varphi_1 \gamma_m \gamma_2} h_t^{\beta\gamma_1 + \varphi_1 \gamma_m \gamma_2 + 1 - \gamma_1 - \gamma_2 - \beta} (k_t^I)^{\alpha\gamma_1 + \gamma_3 - \alpha}. \tag{69}$$

From (60), (62) and (69), the steady-state values of h_t, p_t and k_t^s are given by, respectively:

$$\widetilde{h} = (\frac{\psi_4}{\psi_1})^{\mu_1}(\widetilde{k^S})^{\mu_2}(\widetilde{k^I})^{\mu_3}, \tag{70}$$

$$\widetilde{p} = (\widetilde{k^S})^{\mu_4}(\widetilde{h})^{\mu_5}(\widetilde{k^I})^{\mu_6}\psi_2^{1/1-\Omega}, \tag{71}$$

$$\widetilde{k^S} = (\frac{\psi_3}{\psi_1})^{\mu_7}(\widetilde{p})^{\mu_8}(\widetilde{h})^{\mu_9}(\widetilde{k^I})^{\mu_{10}}, \tag{72}$$

where

$$\psi_1 = (1-\tau)\,\sigma\beta\left(\varepsilon^W\overline{N}\right)^{\beta}, \tag{73}$$

$$\psi_2 = \left(\varepsilon^S\right)^{\Omega_S}\psi_1^{-1}, \tag{74}$$

$$\psi_3 = \left[\upsilon_S\tau\beta\left(\varepsilon^W\right)^{\beta}\overline{N}^{\beta-1}\right]^{\gamma_1}\left(\varepsilon^S\right)^{\gamma_S}\left(\overline{N}\chi\theta\right)^{-\varphi_2\gamma_m\gamma_2}, \tag{75}$$

$$\psi_4 = \left[\upsilon_H\tau\beta\left(\varepsilon^W\right)^{\beta}\overline{N}^{\beta-1}\right]^{\lambda_1}(\varepsilon^E)^{\lambda_E}, \tag{76}$$

$$\mu_1 = \frac{1}{\lambda_1+\beta(1-\lambda_1)}, \tag{77}$$

$$\mu_2 = \frac{\beta(\lambda_1-1)}{\lambda_1+\beta(1-\lambda_1)}, \tag{78}$$

$$\mu_3 = \frac{\alpha(\lambda_1-1)}{\lambda_1+\beta(1-\lambda_1)}, \tag{79}$$

$$\mu_4 = \frac{-\beta}{1-\Omega}, \tag{80}$$

$$\mu_5 = \frac{1-\Omega-\beta}{1-\Omega}, \tag{81}$$

$$\mu_6 = \frac{-\alpha}{1-\Omega}. \tag{82}$$

$$\mu_7 = \frac{1}{1-\gamma_2+\beta(1-\gamma_1)}, \tag{83}$$

$$\mu_8 = \frac{-\varphi_1\gamma_m\gamma_2}{1-\gamma_2+\beta(1-\gamma_1)}, \tag{84}$$

$$\mu_9 = \frac{(\gamma_1 - 1)(\beta - 1) + \gamma_2(\varphi_1\gamma_m - 1)}{1 - \gamma_2 + \beta(1 - \gamma_1)}, \tag{85}$$

$$\mu_{10} = \frac{\alpha(\gamma_1 - 1) + \gamma_3}{1 - \gamma_2 + \beta(1 - \gamma_1)}, \tag{86}$$

Equation (47) can be used together with Equation (48) to obtain the growth rate of final output for $t + 1$:

$$Y_{t+1} = \left(k^I_{t+1}\right)^{\alpha} \left(\varepsilon^W \overline{N}\right)^{\beta} (k^S_{t+1})^{\beta} h^{\beta}_{t+1} \sigma (1 - \tau) \beta Y_t, \tag{87}$$

which can then be rewritten to obtain the steady-state growth rate of final output:

$$1 + \gamma = \psi_5 (\widetilde{k^S})^{\beta} (\widetilde{h})^{\beta} (\widetilde{k^I})^{\alpha}, \tag{88}$$

where

$$\psi_5 = \left(\varepsilon^W \overline{N}\right)^{\beta} \sigma (1 - \tau) \beta. \tag{89}$$

References

Agénor, P.R. (2011). Schooling and public capital in a model of endogenous growth. *Economica*, 78(309), 108-132.

Agénor, P.R., and Alpaslan, B. (2018). Infrastructure and industrial development with endogenous skill acquisition. *Bulletin of Economic Research*, 70(4), 313-334.

Agénor, P.R., Canuto, O., and da Silva, L. P. (2014). On gender and growth: The role of intergenerational health externalities and women's occupational constraints. *Structural Change and Economic Dynamics*, 30, 132–147.

Agénor, P.R., and Dinh, H. (2015). Social capital, product imitation and growth with learning externalities. *Journal of Development Economics*, 114(C), 41-54.

Agénor, P.R., and Alpaslan, B, "Child labor, intra-household bargaining and economic growth," Centre for Growth and Business Cycle Research (CGBCR) Discussion Paper Series, No.181, University of Manchester (2013).

Akbari, M., Bahrami-Rad, D., and Kimbrough, E.O. (2019). Kinship, fractionalization and corruption. *Journal of Economic Behavior and Organization*, 166, 493-528.

Allesina, S. (2011). Measuring nepotism through shared last names: The case of Italian academia. *PLoS One*, 6(8), 1-6.

Alpaslan, B. (2017). Are human and social capital linked? Evidence from India. *Metroeconomica*, 68(4), 859-881.

Alpaslan, B., and Ali, A. (2017). The spillover effects of innovative ideas on human capital. *Review of Development Economics*, 22(1), 333–360.

Alpaslan, B., and Burchell, B. "Gender inequality, social capital and economic growth in Turkey," Centre for Applied Macroeconomic Analaysis (CAMA) Working Paper, No. 57/2022, Crawford School of Public Policy, Australian National University (2022).

Alpaslan, B., and Yildirim, J. (2020). The missing link: Are individuals with more social capital in better health? Evidence from India. *Social Indicators Research*, 150(3), 811–834.

Anderson, C. J., and Tverdova, Y. V. (2003). Corruption, political allegiances, and attitudes toward government in contemporary democracies. *American Journal of Political Science*, 47(1), 91–109.

Andriani, L. (2021). Corruption aversion, social capital, and institutional trust in a dysfunctional institutional framework: Evidence from a Palestinian survey. *Journal of Economic Issues*, 55(1), 178–202.

Asako, Y., Iida, T., Matsubayashi, T., and Ueda, M. (2015). Dynastic politicians: Theory and evidence from Japan. *Japanese Journal of Political Science*, 16(1), 5-32.

Banerjee, R. (2016). Corruption, norm violation and decay in social capital. *Journal of Public Economics*, 137, 14–27.

Bellows, T.J. (2009). Meritocracy and the Singapore political system. *Asian Journal of Political Science*, 17(1), 24-44.

Bilancini, E., and D'Alessandro, S. (2012). Long-run welfare under externalities in consumption, leisure, and production: A case for happy degrowth vs. unhappy growth. *Ecological Economics*, 84, 194-205.

Bom, P.R., and Ligthart, J.E. (2014). What have we learned from three decades of research on the productivity of public capital?. *Journal of Economic Surveys*, 28, 889-916.

Booth, J. A., and Richard P. B. (2012). Untangling social and political capital in Latin American democracies. *Latin American Politics and Society*, 54(3), 33-64.

Bourdieu, P. (1991). *Language and symbolic power*. Cambridge: Polity Press.

Bramoulle, Y., and Goyal, S. (2016). Favoritism. *Journal of Development Economics*, 122, 16-27.

Brassiolo, P., Estrada, R., and Fajardo, G. (2020). My (running) mate, the mayor: Political ties and access to public sector jobs in Ecuador. *Journal of Public Economics*, 191, 1–15.

Burhan, O. K., van Leeuwen, E., and Scheepers, D. (2020). On the hiring of kin in organizations: Perceived nepotism and its implications for fairness perceptions and the willingness to join an organization. *Organizational Behavior and Human Decision Processes*, 161, 34–48.

Chatterjee, S., and Pal, D. (2021). Is there political elite capture in access to energy sources? Evidence from Indian households. *World Development*, 140, 1–14.

Coco, G., and Lagravinese, R. (2014). Cronyism and education performance. *Economic Modelling*, 38, 443-450.

Coleman, J. S. (1988). *Social capital in the creation of human capital*. University of Chicago Press.

Coppier, R., Sabatini, F., and Sodini, M. (2019). Social capital, human capital, and fertility. *Macroeconomic Dynamics*, 25(3), 632–650.

Dal Bo, E., Dal Bo, P., and Snyder, J. (2009). Political dynasties. *The Review of Economic Studies*, 76(1), 115–142.

De la Croix, D., and Goni, M, "Nepotism vs. intergenerational transmission of human capital in academia (1088-1800)", Discussion Paper Series in Economics, No. 9/2021, Norwegian School of Economics, Department of Economics (2021).

De la Croix, D., and Vander Donckt, M. (2010). Would empowering women initiate the demographic transition in least developed countries?. *Journal of Human Capital*, 4, 85-129.

Ehrlich, I., and Lui, F.T. (1999). Bureaucratic corruption and endogenous economic growth. *Journal of Political Economy*, 107(S6), S270-S293.

Fafchamps, M., and Labonne, J. (2017). Do politicians' relatives get better jobs? Evidence from municipal elections. *The Journal of Law, Economics, and Organization*, 33(2), 268–300.

Folke, O., Persson, T., and Rickne, J. (2017). Dynastic political rents? Economic benefits to relatives of top politicians. *The Economic Journal*, 127(605), F495-F517.

George, S. E., and Ponattu, D, "Like father, like son? The effect of political dynasties on economic development", Harvard University Working Paper, Harvard University, Cambridge, MA. (2018).

Geys, B. (2017). Political dynasties, electoral institutions and politicians' human capital. *The Economic Journal*, 127(605), F474-F494.

Gilani, D. (2020). Creating connections: The role of universities in enhancing graduates' social capital and challenging nepotism. *Perspectives: Policy and Practice in Higher Education*, 24(1), 14-18.

Guiso, L., Sapienza, P., and Zingales, L. "Civic capital as the missing link", NBER Working Paper, No. w15845, National Bureau of Economic Research. (2010).

Hadjar, A.and Becker, R. (2006). *Politisches Interesse und politische Partizpation.* Die Bildungsexpansion. Wiesbaden: VS Verlag für Sozialwissenschaften.

Hickman, E. (2021). The problems with appointing on merit. A human capital analysis. *Journal of Corporate Law Studies*, 21(1), 109-134.

Hudson, S., Gonzales-Gomez, H. V., and Claasen, C. (2019). Legitimacy, particularism and employee commitment and justice. *Journal of Business Ethics*, 157, 589-603.

Ibsen, C. L., Ellersgaard, C. H., and Larsen, A. G. (2021). Quiet politics, trade unions, and the political elite network: The case of Denmark. *Politics & Society*, 49(1), 43-73.

Jaimovich, E., and Rud, J. P. (2014). Excessive public employment and rent seeking traps. *Journal of Development Economics*, 106(C), 144-155.

Jessop, B. (2002). *The future of the capitalist state.* Polity Press.

Kim, K. (2007). Favoritism and reverse discrimination. *European Economic Review*, 51(1), 101-123.

Kramarz, F., and Skans, O.N. (2014). When strong ties are strong: Networks and youth labour market entry. *The Review of Economic Studies*, 81(3), 1164-1200.

Kyriacou, A. P. (2016). Individualism-collectivism, governance and economic development. *European Journal of Political Economy*, 42, 91-104.

Leung, T. Y., and Sharma, P. (2021). Demystifying the dark side of board political capital. *Journal of Business Research*, 126, 307-318.

Levine, D. K., Weinschelbaum, F., and Zurita, F. (2010). The brother-in-law effect. *International Economic Review*, 51(2), 497-507.

Macchiavello, R. (2008). Public sector motivation and development failures. *Journal of Development Economics*, 86, 201-213.

Morris, S. D., and Klesner, J. L. (2010). Corruption and trust: Theoretical considerations and evidence from Mexico. *Comparative Political Studies*, 43(10), 1258–1285.

Nee, V., and Opper, S. (2010). Political capital in a market economy. *Social Forces*, 88(5), 2105-2132.

O'Neill, M. P., and White, S. (2018). *Trade unions and political equality. In: Philosophical foundations of labour law.* Oxford University Press.

Perez-Alvarez, M., and Strulik, H. (2021). Nepotism, human capital and economic development. *Journal of Economic Behavior and Organization*, 181, 211-240.

Ragauskas, R., and Valeskaite, I. (2020). Nepotism, political competition and overemployment. *Political Research Exchange*, 2(1), 1-17.

Rauch, J., and Evans, P.B. (2000). Bureaucratic structure and bureaucratic performance in less developed countries. *Journal of Public Economics*, 75(1), 49-71.

Rius-Ulldemolins, J., Moreno, V. F., and Marti, G. H. (2019). The dark side of cultural policy: Economic and political instrumentalisation, white elephants and corruption in Valecian cultural institutions. *International Journal of Cultural Policy*, 25(3), 282-297.

Scoppa, V. (2009). Intergenerational transfers of public sector jobs: A shred of evidence on nepotism. *Public Choice*, 141(1), 167-188.

Sevinc, O., and Cakir, E, "Rising labor share in Turkey", Research Notes in Economics, No.2021-01, Central Bank of Republic of Türkiye (2021).

Szakonyi, D. (2019). Princelings in the private sector: The value of nepotism. *Quarterly Journal of Political Science*, 14(4), 349-381.

Utami, A. W., and Cramer, L. A. (2020). Political, social, and human capital in the face of climate change: Case of rural indonesia. *Community Development*, 51(5), 556–574.

Vveinhardt, J., and Sroka, W. (2020). Nepotism and favouritism in Polish and Lithuanian organizations: The context of organisational microclimate. *Sustainability*, 12, 1-23.

Woolcock, M., and Narayan, D. (2000). Social capital: Implications for development theory, research, and policy. *The World Bank Research Observer*, 15(2), 225-249.

Wooldridge, A. (2023). *The aristocracy of talent. How meritocracy made the modern world?*. Penguin Books Ltd.

Wu, C., and Tang, Q. (2019). Reward meritocracy or nepotism? The case of independent financial advisors appointed by Chinese listed companies. *China Journal of Accounting Research*, 12(3), 315-335.

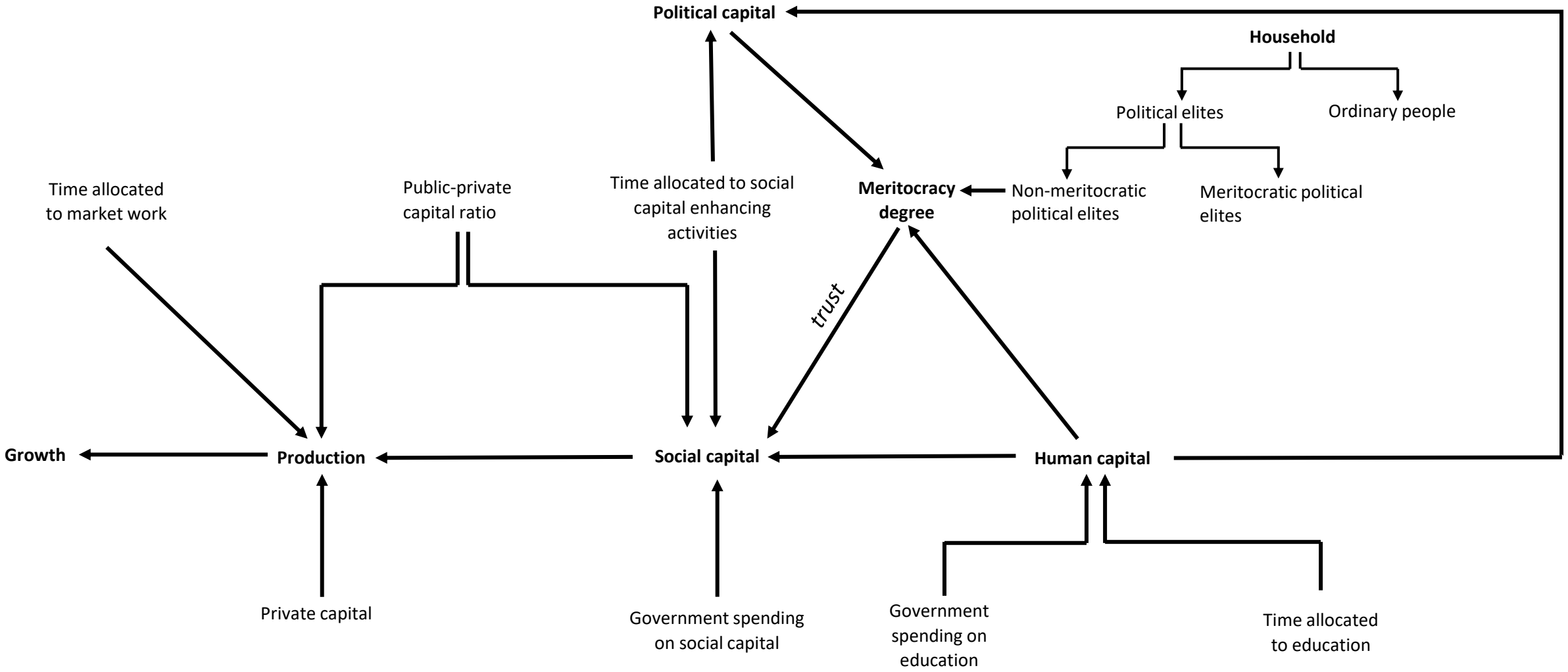
Table 1: Baseline Calibration

Parameter	Value	Description	Data Source
Households			
ρ	0.04	Annual discount rate	Agénor & Dinh, 2015; Agénor & Alpaslan, 2018
σ	17.6	Family's propensity to save	TURKSTAT
η_C	1.98	Preference parameter for consumption in adulthood	Calculated
ε^P	0.172	Time allocation for personal care	TURKSTAT
ε^W	0.371	Time allocation for market work	TURKSTAT
ε^H	0.099	Time allocation for household chores	TURKSTAT
ε^E	0.005	Time allocation for further education	TURKSTAT
ε^S	0.152	Time allocation for social capital building activities	TURKSTAT
ε^O	0.201	Time allocation for other activities	TURKSTAT
χ	0.13	The share of political elites in the society	Calculated
θ	0.033	The share of non-meritocratic political elites	Calculated
Human Capital			
λ_1	0.45	Elasticity w.r.t. government spending on human capital	Agénor & Dinh, 2015; De la Croix & Vander Donckt, 2010 Alpaslan, 2017
λ_E	0.3	Elasticity w.r.t. time allocation for education	Agénor & Dinh, 2015
Political Capital			
Ω	0.1	Elasticity w.r.t. political capital-social capital ratio	NA
Ω_S	0.1	Elasticity w.r.t. time allocation for social capital building activities	NA
Social Capital			
γ_1	0.3	Elasticity w.r.t. government spending on social capital	Agénor & Dinh, 2015; Alpaslan, 2017
γ_2	0.3	Elasticity w.r.t. the stock of social capital	Agénor & Dinh, 2015
γ_3	0.3	Elasticity w.r.t. public-private capital ratio	Agénor & Dinh, 2015
γ_S	0.1	Elasticity w.r.t. time allocation for social capital building activities	NA
γ_m	0.1	Elasticity w.r.t. meritocracy degree	NA
Meritocracy			
ϕ_1	0.1	Elasticity w.r.t. human capital-political capital ratio	NA
ϕ_2	0.1	Elasticity w.r.t. the share of non-meritocratic political elites	NA

Table 1: Baseline Calibration (Continue)

Parameter	Value	Description	Data Source
Firms			
α	0.17	Elasticity w.r.t. public-private capital ratio	Bom and Ligthart, 2014; Alpaslan and Ali, 2017
β	0.35	Elasticity w.r.t. effective labour	Agénor, 2011; Agénor et al. 2014; Alpaslan, 2017; Agénor and Alpaslan, 2018
Government			
τ	0.33	Effective tax rate on wages	OECD
υ_H	0.104	The share of government spending on human capital	TR Ministry of Treasury & Finance
υ_S	0.02	The share of government spending on social capital	TR Ministry of Treasury & Finance
υ_I	0.035	The share of government spending on infrastructure	TR Ministry of Treasury & Finance
υ_O	0.841	The share of government spending on other items	TR Ministry of Treasury & Finance

Figure 1. Theoretical Framework



Source: Authors' own diagram

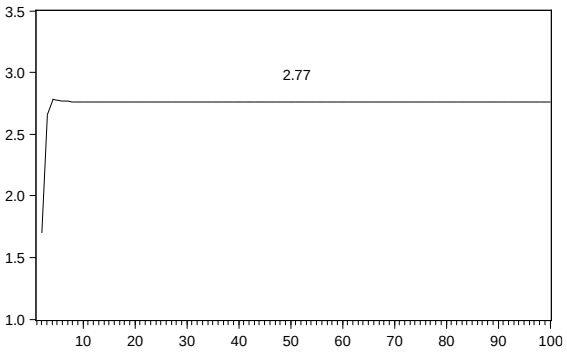


Figure 2. Social capital-private capital ratio (baseline scenario).

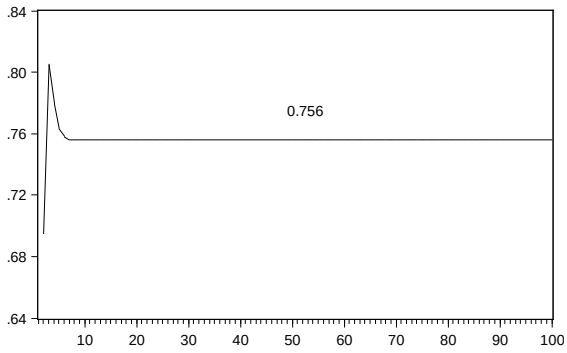


Figure 3. Human capital-private capital ratio (baseline scenario).

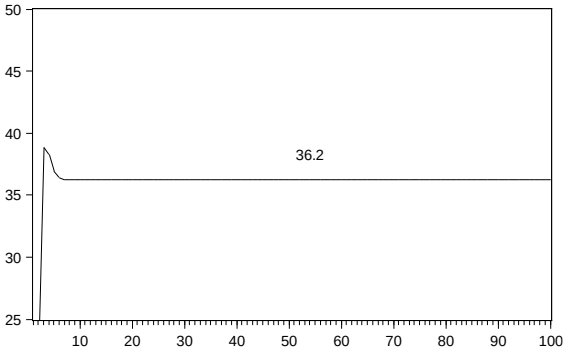


Figure 4. Political capital-private capital ratio (baseline scenario).

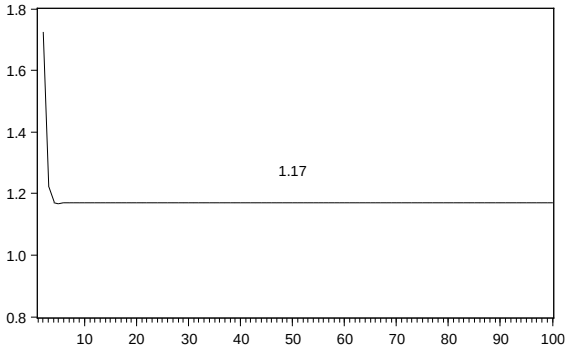


Figure 5. Meritocracy degree (baseline scenario).

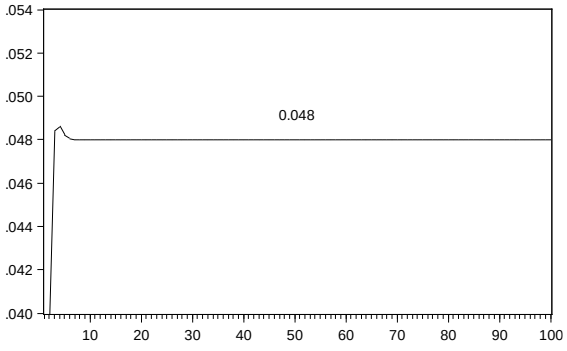


Figure 6. Growth rate of final output (baseline scenario).

Table 2

Increase in the Share of Government Spending on Social Capital Building Activities

Absolute deviations from baseline

Panel A: Financed by a Cut in υ_o 1/

Variables	Baseline	Benchmark	$\gamma_1 = 0.5$	$\gamma_1 = 0.7$	$\gamma_2 = 0.5$	$\gamma_2 = 0.7$	$\gamma_m = 0.3$	$\gamma_m = 0.9$	$\gamma_2 = 0.5$ & $\gamma_m = 0.3$	$\gamma_2 = 0.7$ & $\gamma_m = 0.9$
Public-private capital ratio	0,0979	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Social capital-private capital ratio	2,7672	0,8850	0,4543	0,1391	1,8126	6,7351	0,8952	0,9268	1,8633	8,8780
Human capital-private capital ratio	0,7562	-0,0603	-0,1670	-0,4406	-0,0724	-0,0870	-0,0602	-0,0600	-0,0722	-0,0836
Political capital-private capital ratio	36,2427	-5,3191	-21,0343	-87,8073	-5,7157	-5,4385	-5,2981	-5,2349	-5,6596	-4,8952
Meritocracy degree	1,1714	0,0089	0,0161	0,0245	0,0122	0,0194	0,0089	0,0090	0,0122	0,0202
Growth rate of final output	0,0480	0,0034	0,0046	0,0049	0,0051	0,0097	0,0034	0,0034	0,0051	0,0107

Panel B: Financed by a Cut in υ_H 2/

Variables	Baseline	Benchmark	$\gamma_1 = 0.5$	$\gamma_1 = 0.7$	$\gamma_2 = 0.5$	$\gamma_2 = 0.7$	$\gamma_m = 0.3$	$\gamma_m = 0.9$	$\gamma_2 = 0.5$ & $\gamma_m = 0.3$	$\gamma_2 = 0.7$ & $\gamma_m = 0.9$
Public-private capital ratio	0,0979	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Social capital-private capital ratio	2,7672	0,7503	0,4464	0,1471	1,8944	8,7239	0,7569	0,7774	1,9398	11,2764
Human capital-private capital ratio	0,7562	-0,2017	-0,3756	-0,7833	-0,2030	-0,1962	-0,2011	-0,1993	-0,2017	-0,1842
Political capital-private capital ratio	36,2427	-8,9301	-29,0592	-109,6623	-9,1048	-8,0956	-8,8787	-8,7251	-8,9875	-7,1556
Meritocracy degree	1,1714	-0,0032	0,0053	0,0153	0,0016	0,0122	-0,0032	-0,0032	0,0016	0,0127
Growth rate of final output	0,0480	-0,0012	0,0015	0,0030	0,0006	0,0060	-0,0012	-0,0012	0,0007	0,0065

1/ Increase in the share of government spending on social capital building activities, υ_s from 0.02 to 0.05 is financed by a concomitant cut in the share of government spending on other items, υ_O .

2/ Increase in the share of government spending on social capital building activities, υ_s from 0.02 to 0.05 is financed by a concomitant cut in the share of government spending on education, υ_H .

Note that γ_1, γ_2, and γ_m are the elasticities of social capital with respect to government spending on social capital, the stock of social capital, and the meritocracy degree; in the benchmark case they are set equal to 0.3, 0.3, and 0.1, respectively.

Source: Authors' own calculations.

Table 3

Increase in the Share of Government Spending on Infrastructure Investment

Absolute deviations from baseline

Panel A: Financed by a Cut in υ_o 1/

Variables	Baseline	Benchmark	$\gamma_2 = 0.5$	$\gamma_2 = 0.7$	$\gamma_3 = 0.5$	$\gamma_3 = 0.7$
Public-private capital ratio	0,0979	0,0840	0,0840	0,0840	0,0840	0,0840
Social capital-private capital ratio	2,7672	0,2888	0,6860	2,8120	0,4352	0,4526
Human capital-private capital ratio	0,7562	-0,0854	-0,0874	-0,0873	-0,1266	-0,1772
Political capital-private capital ratio	36,2427	-7,4108	-6,8286	-5,4556	-12,2927	-19,2427
Meritocracy degree	1,1714	0,0128	0,0149	0,0195	0,0167	0,0204
Growth rate of final output	0,0480	0,0049	0,0063	0,0098	0,0059	0,0066

Panel B: Financed by a Cut in υ_H 2/

Variables	Baseline	Benchmark	$\gamma_2 = 0.5$	$\gamma_2 = 0.7$	$\gamma_3 = 0.5$	$\gamma_3 = 0.7$
Public-private capital ratio	0,0979	0,0840	0,0840	0,0840	0,0840	0,0840
Social capital-private capital ratio	2,7672	0,1761	0,7518	4,2876	0,3553	0,3960
Human capital-private capital ratio	0,7562	-0,2217	-0,2148	-0,1964	-0,2777	-0,3447
Political capital-private capital ratio	36,2427	-10,7776	-10,0591	-8,1094	-16,3918	-24,2333
Meritocracy degree	1,1714	0,0007	0,0043	0,0122	0,0046	0,0085
Growth rate of final output	0,0480	0,0003	0,0018	0,0060	0,0016	0,0026

1/Increase in the share of government spending on infrastructure investment, υ_I from 0.04 to 0.065 is financed by a cut in the share of government spending on other items, υ_O.

2/Increase in the share of government spending on infrastructure investment, υ_I from 0.04 to 0.065 is financed by a cut in the share of government spending on education, υ_H.

Note that γ_2 and γ_3 are the elasticities of social capital with respect to the stock of social capital and the public-private capital ratio; in the benchmark case they are both set equal to 0.3.

Source: Authors' own calculations.

Table 4

Decrease in the Share of Non-Meritocratic Political Elites 1/
Absolute deviations from baseline

Variables	Baseline	Benchmark	$\phi_2 = 0.3$	$\phi_2 = 0.5$	$\phi_2 = 0.7$
Public-private capital ratio	0,0979	0,0000	0,0000	0,0000	0,0000
Social capital-private capital ratio	2,7672	0,0024	0,0075	0,0129	0,0187
Human capital-private capital ratio	0,7562	-0,0002	-0,0006	-0,0010	-0,0013
Political capital-private capital ratio	36,2427	-0,0181	-0,0531	-0,0868	-0,1193
Meritocracy degree	1,1714	0,0342	0,3147	1,6083	6,9065
Growth rate of final output	0,0480	0,000010	0,000031	0,000052	0,000074

1/ Decrease in the share of nonmeritocratic political elites from 0.033 to 0.025.

Note that ϕ_2 is the elasticity of meritocracy degree with respect to the share of non -meritocratic political elites; in the benchmark case it is set equal to 0.1.

Source: Authors' own calculations.