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PRIVATIZATION MIRAGE IN IRAN: INFLUENCE ON IMPROVEMENT OF EFFICIENCY OF INSURANCES BRANCHES?

HAMID ASAYESH[1], MOHAMAMADREZA MOHAMMADI[2], MEHDI ZAHED[3] & ZAHRA GHORBANI DISFANI[4]

[1]Lecturer Faculty of Humanities, University of Ayatollah Alozma Boroujerdi (RA), Iran

[2]Imam Khomeini Naval University of Noshahr, Mohammadreza Mohammadi, Iran

[3]Lecturer Faculty of Humanities, University of Ayatollah Alozma Boroujerdi (RA), Iran

[4]Expert Supreme Audit Court, Iran

ABSTRACT

Increase of efficiency is one of the aims of privatization in a way that in Iran also, privatization of governmental enterprises to the aim of efficiency has gained huge concern from the system soon after notification of general policies of the Principle 44 of the Constitution.

However the private enterprises work efficiently? To answer the question, following a SFA approach, a number of insurances branches in Tehran including private insurances and a state –owned insurances were measured in terms of their efficiency just before and after privatization in accordance with the law on following the general policies of the 44th principle. The findings show that the performance of the whole range of the private branches, compared to that when they were part of public sphere, was less efficient. These branches also were the most efficient when they were publicly owned. There is, therefore, no direct cause –effect relationship between privatization and efficiency, and still some inefficient private businesses, at least remain in the economy system. Thus, the only alternative to making the public enterprises efficient is not made possible by the privatization of these businesses.

KEYWORDS: Insurance, Efficiency, Ownership, Privatization

INTRODUCTION

As we see it, the most important arguments in favour of a major public-sector role in insurance have to do with equity, and with the twin problems of adverse selection and high administration costs. There is a growing interest and concern about the international competitiveness and efficiency of financial institutions in general and insurance companies in particular. An insurer can do business in all countries provided that it is licensed in one country.

When analyzing a privatization, Competition Authorities usually focus on the impact the operation has on efficiency. Supposedly there is a trade-off between these two aspects. On the one hand privatization may increase firms' incentives to increase efficiency, either unilaterally or through coordination. On the other hand, privatization may reduce firms' marginal costs. Since late 1970, privatization has become a dominant aim in national policies of the governments and each country has pursued a certain model of privatization according to its own condition. Undoubtedly, privatization is defined as delegating role and function of governmental sector to private sector through assigning enterprise's ownership and management to the latter. Privatization is a method of enhancement of efficiency in goods and services' production

process as well as revenue increase in enterprises. This way, economic performance and efficiency improvement realizes through creating an incentive system based on personal benefit. Theoretical background Property rights theory (Alchian & Demsetz, 1973; Boardman & Vining, 1989; De Alessi, 1969;Villalonga, 2000), agency theory (Cavaliere & Scabrosetti, 2008; Hart, Shleifer, & Vishny, 1997;Martimort, 2006; Sappington & Stiglitz, 1987) and related approaches (Pint, 1991) all posit that private sector ownership of corporate entities is likely to result in greater efficiency that publicsector ownership, particularly in somewhat competitive industries. To confirm this, we may refer to recent research by Mukherjee and Suetrong (2009) according to which efficiency enhancement in enterprises and also income increase in countries is one of the main objectives and promises made by privatization. From amongst different studies made across the world, some confirmed realization of efficiency target and some rejected it, e.g. Vining and Boardman (1996) confirm efficiency in private sector via comparing productivity in 500 international private and governmental companies. However, according to Warner (2008), results from studies in US shows that privatization does not lead to cost saving, and research upon airports all around the world by Oum et al. (2006) showed that those airports totally managed by the government were approximately of equal efficiency comparing with those owned completely or partially by private sector. So, there are no strong results indicating that privatization has positive effect on companies' efficiency in the world. Again, more comparative researches regarding privatization's effect have been mainly based on financial aspect, which such an attitude needs to be corrected.

The purpose of this paper is to examine several important dimensions of heterogeneity in the firm performance effects of privatization. In order to obtain estimates that are reliable and comparable, we analyze most privatizations over a long time period with similar data for Tehran. We also use a common set of firm's performance measures, including measures of profitability, efficiency, and growth, to examine robustness in the patterns and sources of variation in estimated privatization effectiveness. The data size is much larger in both the cross-sectional and time-series dimensions than any previous study of privatization and it facilitates the use of panel data econometric methods to identify causal effects, estimate how the estimates vary with observable factors, and carry out specification checks of alternative identification methods. From a public policy perspective, the social value of privatization depends on the aggregate efficiency benefits over the long term. However, most privatization studies that examine the efficiency impacts of privatization employ relatively short time frames: usually 3-years before and 3-years after the privatization. In contrast, this study examines the long run effects (up to 14 years) of privatization on efficiency basedon an examination of major. A much longer time frame is needed to provide successor governments with the performance evidence to rationally assess the aggregate impact of privatization. Our study examines the impact of privatization on the efficiency over a long time period.

PRIVATIZATION IN IRAN

Point of departure of privatization policy in Iran has its roots in the First Development Plan, after 1979 Revolution. Insurance industries, health and treatment as well as education sectors are considered as those points of focus gradually covered by privatization policy, after the war. During recent years, implementation of general policies of the 44th Principle of the Constitution has refreshed Iranian financial markets and economic scene. Three decades passed from commencement of privatization in the world, it has begun seriously in Iran upon notification of general policies of the Principle 44 of the Constitution, and in consideration of new Rules and statutory policies including The Future Outlook of the Islamic Republic of Iran in the Horizon of the Next Two Decades, in addition to the Law on implementation of general policies of the Principle 44 of the Constitution as well as those Rules enacted in terms of development plans of

privatization in Iran.

Insurances also are considered as one of the most important economic institutions and strong foundations for financial system of each and every economy, especially in Iran with underdeveloped and shallow financial markets. Attracting peoples' dispersed Costs s, insurances could supply and mobilize financial sources of Iran's economic development. Should the insurances be efficient in attracting, allocating and flowing peoples' dispersed Costs s, they could prepare the ground for economic growth; otherwise they not only could not provide for economic development, but also would create crisis.

This is why privatization of insurances and contribution of private sectors in insurance system of Iranian economy was deemed as a solution towards improvement of efficiency of insurances' performance in Iran's economy. The question is: "if governmental enterprises are necessarily inefficient, shall we conclude for private enterprises to be necessarily efficient, and if governmental enterprises should be deserted, shall we take refuge in private enterprises, instead? Shall inefficiency of governmental enterprises force us towards adoption of private ones as a remedy? And in order for efficiency to be realized in the economy, is it enough to take advantage of privatization and contribution of private enterprises in the economy?

To answer these, we examined efficiency of different branches of a private insurance and also a privatized governmental insurance in Tehran, both in before and after transformation periods and classified them upon efficiency level. That is, we made a comparison between current and potential efficiency of private, governmental and privatized branches of insurances.

LITERATURE REVIEW

Efficiency

The conceptualization and discussions on efficiency were systematically heralded by the studies conducted by Debro and Koopmans followed Farrell (1957). The practicality of them measurement of efficiency, based on the SFA approach, dates to 1997, and in the DEA linear programming method, to 1978. Efficiency, for Farrell. is the extent of access an enterprise may have to the maximum production obtained via a combination of different inputs. Efficiency is achieved by the ratio between the current production, in an enterprise, and its potential capacity top the ratio between the current production, in an enterprise, and its potential capacity to produce the ratio between the current output and potential output. To measure efficiency, the extent of potential output needs to be compared to that of the output already existing. The production function shows the maximum output obtained from a given amount of inputs. Among the most predominant ways to achieve frontier production function in order to measure efficiency are the SFA and DEA practices.

What these two approaches have in common is that the standard (potential).

Output amount can be achieved through a performance comparison among the entities and units under study in different periods, and then the maximum output is reached for given inputs.

It is impossible, based on the methods noted above, to measure the efficiency of a single entity on its own in a given period. Instead, an entity performance has to be studied in different periods, there by the best performance will be considered as an efficient production where the data on time series are taken into account.

Alternatively, a comparison might be made between a number of entities in terms of performance, and the highest

performance attributed to an entity would be an efficient production in which the data on a given period are involved. Or the entities under study, on more confident grounds, may be compared in different periods where a combination of data is used.

A relative efficiency is achieved through these practices because a comparative inference method is used in which any change in the number of observations is followed by varying degrees of efficiency, there by more observations, the more reliable efficiency factors.

To measure efficiency by any method, it is necessary to collocate the inputs and the outputs as well as the frontier output function (standard production function).

RESEARCH METHOD

An economically – based approach to the measurement of efficiency was introduced in 1957 by Farrell who measured the efficiency in the us agriculture. However, his approach wasn't welcomed due to the practical of measurement and a limited fixed value of yield out of the scale. By the year 1977, concomitantly in Europe and the American .efficiency were practically based on Farrell's conceptualization. Sured via the SFA method which is grounded on economy measurement models and microeconomic theories. Here, first, production function is estimated with respect to the assumptions and then the efficiency of the entity is measured. In the frontier estimation, the frontier points are considered while the intermediate points in normal estimation of economy measurement, a taken into account the distance along the ordinate, from the starting point is longer for the production function in frontier estimation method than in ordinary estimation.

The former function indicates a higher potential output for any amount of input.

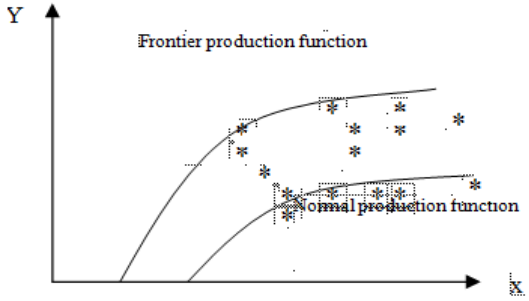
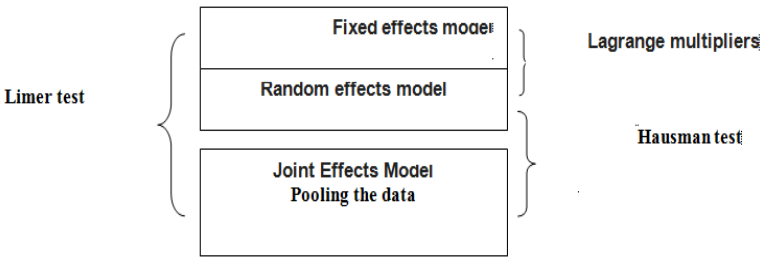


Figure 1: The Difference between Frontier and Normal Production Functions

By this method, consistent Frontier function is achieved. To estimate production function, a maximum optimization is the common approach to measuring the economy because production functions are mainly nonlinear and in this method the compatibility of non-linear function is preserved.

The aim of this study is to evaluate the feasibility and necessity of privatization in the non-life insurance industrying system, which is not targeted in previous studies. For this purpose the stochastic frontier analysis with panel data is used. In the previous studies done on the type of data used in the stochastic frontier analysis methods, Unit root tests have been neglected; this leads to skewed and biased estimates. In this study, this objection is solved. To determine the type of data used in the model a combination of different tests are used. The most common one is Limer test. Using the fixed effects is the model for panel data. Hausman test is used for fixed effects model by the random effects.

Table 1: The Diagnostic Tests for Panel Data



To formulate frontier production two models have been introduced. The first model was introduced, in 1977, by long, Lowell, smith and me arson and wanton brake separately in Europe and amerces as follows:

Where v is the random confusion component ,u is inefficiency value vector ,Y, is the entity product vector ,X production input vector and B is parameter vector .In frontier cost function, the confusion component is vote.

The second function introduced by Betties and collie (1992) to measure the amount of inefficiency in the with entity within the time t (U_{it}) is:

$$U_{it} = \{V_i + t \times P(-\eta(t - T))\} \quad (1)$$

Where V_{it} is the non-negative random variables, taken as granted, that have the average μ and the variance σ_u^2, η is the unknown parameter vector to be estimated, T is the number of periods and t is the current period. The technical inefficiency of the ith entity, therefore, within the time t (U_{it}) is conditioned by the parameter η and the number of the periods left (t-T). If t=T, then $V_{it} = U_{it}$. It means that the ith entity has technical efficiency during the last period. The reeducation, constancy and increase in the efficiency of the entity over the time is a function of the estimation parameter η . If the technical efficiency has η>0 improved, but if its value is less than zero, the efficiency has decreased, and finall if η=0, the efficiency remained constant. The second model for the formulation of frontier production is the technical effect model introduced by bettise and collie in 1995 as following:

$$\begin{aligned} Y_{it} &= X_{it}\beta + (V_{it} - U_{it}) \\ i &= 1, \ldots, N \\ t &= 1, \ldots, T \end{aligned} \quad (2)$$

Where v is the random confusion component, u is inefficiency values vector, Y is the entity product vector, X is production inputs vector, and B is parameter vector.

In this Model, not technical efficiency quantity but the parameters influencing efficiency are estimated. It means that the inefficiency component u is formed by such factors as managerial experiences, the nature of ownership, the

amount of assets, act in order to find out what constitutes inefficiency u. the inefficiency component, in this model, is not independent of the observations. The estimation mediated by bettise and collie model comes IV two phases. First, the initial model $Y_{it} = X_{it}\beta + (V_{it} - U_{it})$ is estimated and the values for V_{it} are measured which are the independent and random variables. In these condphase, the values are regressed to the potential parameters having affection the inefficiency of the entity.

$$Uit = z_{it\partial + Wit} \quad Wit \square N\left(0, \sigma_w^2\right)$$
$$Uit \square N\left(m_{it,}, \sigma_u^2\right) \tag{3}$$
$$mit = z_{it}\sigma$$

Where z_{it} is mx1 vector for the factors potentially influencing inefficiency σ is the variable coefficients that should be estimated. σ Is a vector with the degree Wit . 1*M

Which is the model confections component? It provides the classical assumptions and has a normal distribution with a zero average and the variance σ_w^2 .

If the potential parameters of inefficiency have no effect on it, all the components will have a zero value and the semi-normal distribution as introduced by Schmidt.

Insurance Output-Input

In any economic entity like insurance, the nature of output and input is defined by our expectation and description of the entity. Any change in our definition of insurance will alter the nature of its output and input as well. In a service production oriented approach to insurance, it is deemed as a service entity. Controllable variables Inputs includ: Number of employees, Costs, premium. And Paid compensation is insurance Outputs.

MODELING

To estimate a SFA function, two steps need followed:

Defining the nature of production function: Among such production function: among such production functions as cob Douglas, Tran's log, CES functions, linear and Leontief, one needs to be selected.

Defining the nature of distributing the technical inefficiency component:

In frontier –random functions, the error component is a complex error statement composed of a random error and a one-way confusion statement indicating the technical inefficiency. In this step, the effect the predicted inefficiency has, as a dependent variable, on independent explanatory variables is regressed.

The two –step estimation of these functions was severally criticized for its different hypotheses during the steps. in the first step, it is hypothesized that the effect of inefficiency has a similar distribution which is independent of the observations, in the 2nd step, the hypothesis in the first step is rejected. to estimate a frontier random function , therefore, a one-step maximum correct representation method is used.

To determine an enterprise efficiency in the maximum correct representation during a given period, the deviation of output and input from the random frontier function is measured which is estimated with the combined data and divided into one technical inefficiency component and a random confusion component , In general , the economy measurement model in frontier random function is as follows:

$$Y_i = X_i\beta + (V_i - U_i)$$

$$i = 1,..., N \quad (4)$$

Where v indicates the random confusion component vector, u is the vector the values for technical inefficiency, Y is the entity's product vector, X is the entity input matrix and β

Is parameter vector. The function form used in the study is a general form of Cobb Douglas Model

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + v_{it} - u_{it} \quad (5)$$

where y is the logarithm for Paid compensation, X_1, is the logarithm for area of Number of employees, X_2 is the logarithm for Costs, X_3, is the logarithm for the premium, V_{it} is the model confusion component, U_{it} is the inefficiency component of the ith branch during the time, t (t=1, 2 and i=1, 2,…, 174) as its negative coefficient indicates that any incur as in inefficiency will decrease insurance Premiums.

The Estimation of Insurance Technical Efficiency Model

Insurance efficiency is the result of dividing the entity's effective output by its potential output in terms of its input value. This potential output is the standard amount of Paid compensation in each branch which is estimated through frontier random function. For this reason, the data, for a period of 14 years, on 65 Private Branches in Tehran and 140 public Branches in Tehran, and the time they have been privatized in order to investigate the technical efficiency in both private insurances and privatized public insurances. Cobb Douglas production function was estimated by the maximum Likelihood method. To estimate the parameters in frontier 4.1 version was used. The software application has a 3-step procedure for the estimation of the parameters in frontier random function as following:

- The estimation of the parameters for frontier random production functions by means of a minimum normal squares method where all parameters except the ordinate distance β_1 are not estimated obliquely.
- The pursuit of a 2-step point for $\gamma = \frac{\sigma^2_u}{\sigma^2} = \frac{\sigma^2_u}{\sigma^2_u + \sigma^2_v}$

The initial approximation is done with a 2-digit decimal. To achieve the final estimations in the maximum likelihood, the value s chosen to find a point as the initial approximation in a repeatable process are used,

- Except the ordinate distance, the parameter β is put in the values for the minimum normal squares and the parameters β and σ are corrected and modified based on the minimum normal Squares method. Table 1 shows the estimation of the minimum normal squares for the parameters in the frontier random function with respect to

the function form of cob Douglas model as follows:

$\ln Y = -4.02 + 0.47 \ln X_1 + 0.60 \ln X_2 + 0.95 \ln X_3 + V - U$ The output: the monetary value of the insurance Paid compensation

The input: the number employers working for the branch, the amount of Costs and premium of the branch

In output variance $\sigma^2 = \sigma_u^2 + \sigma_v^2$ is the inefficiency variance component as shown in table 2. There force $\gamma = \frac{\sigma^2{}_u}{\sigma^2} = \frac{\sigma^2{}_u}{\sigma^2{}_u + \sigma^2{}_v} = 0.85$ where the error probability is less than 0.1 .ning changes was largely caused by the effects of over. The insurance Premiums were partially affects of the inefficiency u and the unintentional error part which the enterprise has no control over. The insurance Premium s were partially affected by the production function vector V. the variable included in the production function have considerably controlled the driving factors and minimized the unintentional errors.

Using GLRTS test, the significance test was performed . the general form of the test is given below:

$$LR = -2\{Ln[{}^{L(H_0)}\!\!\diagup\!\!{}_{L(H_1)}]\} = -2\{Ln[L(H_0] - Ln[L(H_1]\} \quad (6)$$

Where the value of likelihood is function in the null hypothesis (H_0) and $L(H_1)$ is the values of likelihood function in the opposite hypothesis (H_1). It is assumed that LR has an asymptotic distribution (χ^2) with the free down degree K:

$$LR \sim \chi^2(K) \quad (7)$$

The hypothesis (H_0) indicates the Nunez of variables X_1 - X_3.

$$H_0 = \beta_1 = \beta_2 = \beta_3 = 0$$

In this case, there are three limitations including the critical value at the significance level 0.05 and the free down degree 3 ((χ^2)=7.81). This statistic shows the significant model estimated parameters.

The $sigma-squared(\sigma^2{}_\varepsilon)$ statistic is the total variance of the random component of variance inefficiency and statistically significant at the 1% is achieved. The gamma statistic 0.97 at the 5% significance level is obtained. This statistic represents the proportion of variance in the total variance inefficiency is close to 1 is obtained.Thus, a high proportion of the total variance is the variance of inefficiency and random variance component contributed very little to the total variance.

The results of the estimation of the Paid compensation function parameter via stochastic frontier method are briefly illustrated in table 2. Considering the critical value at %95 confidence level (t = 1.96), the effect of all independent variables on the dependent variable is significant.

Controllable variables Inputs includ: Number of employees, Costs, premium. And Paid compensation is insurance Outputs

Table 2: The Result the Estimation of the Paid Compensation Function Parameters via Stochastic Frontier Method

Variable	Parameter	Coefficient	Standard Deviation	Statistic t
Number of employees (X_1)	β_1	0.66	0.13	5.076
Costs (X_2)	β_2	0.40	0.17	2.515
premium (X_3)	β_3	0.129	0.15	6.867

Source: research findings

As illustrated table 3, the model is significant and the estimate parameters are reliable.

Table 3: Variable Parameters

Variable	Estimate Coefficient	Standard Deviation	Statistic t
$Sigma - squared\ (\sigma^2)$	**7.75**	**1.55**	**5**
$gama\ (\gamma)$	**0.90**	**0.1**	**9**
LR test	**73.54**	------	------

Source: Research findings

Analysis the Results from Model Estimation

Gamma parameter which indicates the proportion of variance inefficiency in the production function is equal to 0.97, the critical value, is significant. Therefore, the proportion of variance in the total variance indicates inefficiency inefficiency of the branches management.

The parameter β1 suggests that the Number of employees influences directly the insurance Paid compensation as proved by the model estimation (β 1=0.66). Considering the statistical significance, Given that the whole range of the factors contributing to the insurance Premium initiatives remain invariable; a one – percent increase in the Number of employees brings about an average 0.66 % increase in the Paid compensation.

The parameter β 2 is indicative of the effect the Costs in the branch has on its Paid compensation. Based on the estimation model And Considering the statistical significance, given the fixed range of the fixed range of the parameters impacting on the Paid compensation, the above effect will be direct; given the invariability of all the driving forces for the branch Premiums, a 1% increase in the Costs in a branch will increase, on the average, the branch Paid compensation up to 0.4 %.

The parameter β3 is the impact of premium which is, according to the estimation model; divert β 2 =0.123, considering the statistical significance, given the invariability of the main factors driving the insurance branches Paid compensation will be increased by 0.123 percent through a one- percent increase in the Premiums.

The inputs used in this study, labor input, have the highest elasticity. Considering the importance of this input in the production function, input capture this kind of insurance specialized activities is a priority.

Following the estimation model, the efficiency is measured for each individual branch based on the estimated

frontier function and the standard Paid compensation amounts defined; table 4 shown insurance technical efficiency separately during each period.

Table 4: The Average Insurance Efficiency for both Public and Privatized Insurances and Private Insurance Based on SFA Method

period	Average efficiency		
	Private Insurance	Public Insurance	A Merger between these Branches
2002-2008	0.671	0.432	0.580
2008-2016	0.606	0.579	0.523

As evident Table 3, the insurances average technical efficiency has decreased over the time. The results obtained from their efficiency index are briefly defined as following:

Among the full range of the branches, 39 insurances which belonged to the period when they were all publicly-owned had 100 % efficiency.

CONCLUSIONS

Scholars posit a number of specific causal mechanisms that should lead to performance improvement following privatization, despite the belief shred by economists that public enterprises are necessarily in efficient and private enterprises are unavoidably efficient , and their strong argument for the inefficiency of public entities as they are publicly owned, neither have they the capacity to control the people hired to run the enterprises nor the motivation to do so because basically they are partially informed of the manager behaviors ; thereby , this natural lack of information will affect the citizens capacity to control, and their motivation is blocked by the problem of “free-riding” . Therefore, state-run enterprises are likely to keep their viability through interest groups rather than improving their production capabilities. Privatization leads to efficiency in its branches, and branches of government insurance, the uninsured are more efficient than private insurance, so specialists in this article are not supported.

It was, in this case study, demonstrated that both the private and privatized enterprises are not necessarily efficient compare to those in the public sphere. The problem needs to be explained now. Indeed, the direct cause all three explanations offered by the economists for the state enterprises inefficiency hold true for large private enterprises. these private entities are run by the managers and their stockholders are extremely dispersed, A private enterprise, run by hired managers, Also, the agent manager problem and free-riders are common in Large private entities as the stockholders naturally profess a partial amount of information, regarding the managers behaviors and are not the referee, suffiently encouraged to control their activities as their agents.

REFERENCE

1. Alirezaee, M.r., (2003), “Designing a performance assessment system for the branches of a commercial bank using a DEA approach”. Research plan, behin Kara International Action Research Intitute: Tehran.
2. Amiri, H., (2001), “A study on the determination of commercial insurance efficiency in Iran”. M.A thesis, Tehran University press.
3. Boardman, A. E., & Vining, A. R. (2012). A review and assessment of privatization in Canada. SPP Research Papers,5(4), 1–5
4. Boardman, E. Aidan R. Vining , David L. Weimer (2016), The long-run effects of privatization on

productivity:Evidence from Canada, Journal of Policy Modeling 38 , 1001–1017

5. Brito, D., Pereira, P., Joaquim J.S. Ramalho(2013), Mergers, coordinated effects and efficiency in the Portuguese non-life insurance industry,International Journal of Industrial Organization 31 , 554–568
6. Brown David J.,. Earle John S, Telegdy Almos (2016), where does privatization work? Understanding the heterogeneity in estimated firm performance effects,Journal of Corporate Finance 41 , 329–362
7. Brown, J. D., Earle, J. S., & Telegdy, A. (2006). The productivity effects of privatization: Longitudinal estimates fromHungary, Romania, Russia and Ukraine. Journal of Political Economy, 114(1), 61–99.
8. Cavaliere, A., & Scabrosetti, S. (2008). Privatization and efficiency: From principals and agents to political economy.Journal of Economic Surveys, 22(4), 685–710.
9. Chong, A., & López-De-Silanes, F. (2004). Privatization in Latin America: What does the evidence say? Journal of theLatin America and Caribbean Economic Association, 4(2), 37–94.
10. Clark, G. R. G., Cull, R., & Shirley, M. M. (2005). Bank privatization in developing countries: A summary of lessons andfindings. Journal of Banking and Finance, 29(8), 1905–1930.
11. Cook, P., & Uchida, Y. (2008). The performance of privatised enterprises in developing countries. Journal of DevelopmentStudies, 44(9), 1342–1353.
12. Corneo, G., & Rob, R. (2003). Working in public and private firms. Journal of Public Economics, 87(7/8), 1335–1352.
13. Curvo, A., & Villalonga, B. (2000). Explaining the variance in the performance effects of privatization. Academy of Management Review, 25(3), 581–590.
14. D'Souza, J., Megginson, W. L., & Nash, R. (2005). Effect of institutional and firm-specific characteristics on post-privatization performance: Evidence from developed countries. Journal of Corporate Finance, 11(5), 747–766.
15. Emami Maybodi, A., (2000), the principles of measuring efficiaency and productivity. Business Research Institute. Tehran
16. Fang, Y., Hasan, I., & Marton, K. (2011). Bank efficiency in South-Eastern Europe: The role of ownership, market powerand institutional development. Economics of Transition, 19(3), 495–520.Ghosh, S. (2010). How did state-owned banks respond to privatization? Evidence from the Indian experiment. Annals ofPublic and Cooperative Economics, 81(3), 389–421.
17. Fuller DL. , Kudlyak M, khagvasuren, D ., (2014) Productivity insurance:The role of unemployment benefits in amulti-sectormodel Journal ofEconomicDynamics&Control47, 39–53
18. Hagedorn, Manovskii, I.,(2008). The cyclical behavior of equilibriumun employment andvacancies revisited. Am.Econ. Rev.98, 1692–1706.
19. Haghlight, J., & nasiri, n., (2003), "insurance efficiency using DEA method. Economic ", RESEARCH Qunterly, vols 9-10, 133-166

20. Kambourov, G., Manovskii, I., (2009).Occupational mobility and wage inequality.Rev.Econ.Stud.76, 731–759.

21. Lijphart, A. (2012). Government forms and performance in thirty-six countries. New Haven/London: Yale UniversityPress.

22. Lin, J.Martimort, D. (2006). An agency perspective on the costs and benefits of privatization. Journal of Regulatory Economics, 30(1), 5–44.

23. Lkhagvasuren, D., (2012). Biglocationalun employment differences despitehighlabormobility.J.Monet.Econ.59, 798–814.

24. Lkhagvasuren, D., (2014). Education, mobility and the college wage premium.Eur.Econ.Rev.67, 159–173.

25. McKenzie, M., & Keneley, M. (2011). Privatization and performance: The case of four Australian financial institutions.Annals of Public and Cooperative Economics, 82(3), 313–334.

26. Moshiri, s., & mashadi, r., (2006), the effects of it technology on Irans aviation industry efficiency, Irans Economic Research Quarterly. Vol 26, 1-24

27. Mukherjee, A., & Suetrong, K., (2009), "Privatization, strategic foreign direct investment and host-country welfare", European Economic Review, 53 (7), 775-785.

28. Nellis, J. (2012). The international experience with privatization: Its rapid rise, partial fall, and uncertain future SPPResearch Papers. Calgary, Alberta: School of Public Policy, University of Calgary.

29. Otchere, I. (2009). Competitive and value effects of bank privatization in developed countries. Journal of Banking andFinance, 33(12), 2373–2385.

30. Oum, T. H., Adler, N., Yu, C., (2006), "Privatization, corporatization, ownership forms and their effects on the performance of the world's major airports". Journal of Air Transport Management, 12 (3), 109–121

31. Pourkazemi, M. h., heidari,k., (2002), "A DEA approach to assessing Irans power stations efficiency". Modares Humanities Quarterly. Vol 1 , 35-53

32. Raimi sooreh, s., sadeghi, h. , (2004), "The driving forces for efficiency and economy of scale in parameter and non-parameter approaches", economic Research Magazine , Vol 6, 291-259

33. Reenen, J. (2012). Americans do IT better: US multinationals and the productivity miracle.American Economic Review, 102(1), 167–201.Bloom, N., Genakos, C., Sadun, R., & Van Reenan, J. (2012). Management practices across firms and countries. Academyof Management Perspectives, 26(1), 12–33.Boardman, A. E., & Laurin, C. (2000). Factors affecting the stock price performance of share issued privatisations. AppliedEconomics, 32(11), 1451–1464.Boardman, A. E., Laurin, C., Moore, M. A., & Vining, A. R. (2009). A cost–benefit analysis of the privatization ofCanadian National Railway. Canadian Public Policy, 35(1), 59–83.