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DO CONTEMPORARY PLAYS FEATURE FEWER ROLES?

SOME EMPIRICAL EVIDENCE

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Some Empirical Evidence

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Abstract

This paper shows that the number of roles in theatre plays has been decreasing over time. Playwrights seem to internalize the costs of producing plays with too many roles by downsizing. This downsizing is not a recent phenomenon: it is going for many decades. We also analyze which plays get produced. This paper uses a unique data set of repertory archives of Turkish State Theatres, covering plays from decades.

Keywords: Number of roles, cast size, Baumol cost disease, playwrights, Turkish State Theatre

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Some Empirical Evidence

1. Introduction

Is theatre, as an art form, shrinking in terms of number of roles? Do contemporary playwrights feature smaller number of roles? If so, it would imply that playwrights internalize the fact that their plays will not be performed if the production costs get too important. “The number of roles” is one of the most important elements of a play. Playwrights tell their stories by writing roles, main characters and minor roles, that is, they are creating the main body of a theatrical event. Directors or actors, on the other hand, create atmosphere to interpret and transmit the message of the playwright to the audience by using stage sets, sound/ music, lighting design, and other tools. Managers or producers, however, think mostly about the cost of production and prospective revenue from ticket sales. Producers in the private sector and bureaucrats in state theatres are decision makers who are supposed to know about the theatre business, as well as supply and demand conditions. A reasonable interaction among these three groups of agents (playwrights, directors/actors, and producers) of live theatre creates a script a produced stage product, a theatrical performance. Nicholson (1993) suggests that “...Everyone involved with theatre readily admits plays truly exist only in performance”. Therefore, playwrights have to take the concerns of producers and directors seriously if they want their plays to get produced or staged. Nicholson (1993) also mentions some other factors which directly affect what a playwright writes: Audiences might have a shorter attention span and/or need to go back home or attend other activities earlier in the evening, which causes managers to produce shorter plays in recent times. In fact, it is an empirical

observation that the duration of contemporary plays is shorter than that of *theatrical events* of Shakespeare's time which are reported to be three hours or sometimes four hours long (Hirrel, 2010). Close substitutes of live theatre such as cinema, television, and other attractions can affect negatively the demand for live theatre and the revenue stream of theatre organizations. In addition, costs have also increased over time. Therefore, producers or managers, even in non-profit theatre organizations, who operate under tight budget constraints, have to take into account possible "earning gaps". If income is not increasing as much as costs, producers or managers have to decide which plays to produce. Given the constraint imposed by demand, producers cannot increase prices to cover all the costs. It is an empirical fact, for a long time now, that earned income (ticket sales) does often not cover the production and operating costs of a play (McCarty et al., 2001). This earning gap might cause producers to produce shorter and low cost plays, which in turn affects what playwrights write in terms of number of roles since production costs are positively related to the number of roles, or the cast.¹ Balio and McLaughlin (1969) give some historic evidence (between the years 1938 and 1960) by investigating 105 Broadway plays in terms of cost structure and cast size. They found that, *ceteris paribus*, real production costs (corrected for inflation) were increasing with the cast size.

Therefore, contemporary playwrights are inclined to write plays with smaller casts. To show this, we use a unique dataset compiled by the Turkish State Theatres (TST), which includes Turkish and foreign plays. The paper is organized as follows. Section 2

¹ We make a difference between "number of roles" and "cast size" The number of roles is decided by the playwright, the cast, by the producer of the play, who frequently takes that artistic liberty to eliminate some (minor) roles, or have the same actor playing several roles See Werck, et al. 2008.

overviews the existing literature. Section 3 describes the data and conducts the statistical analysis. Section 4 concludes the paper.

2. Literature Review

Although there are many papers studying the cost disease in the arts, very few investigate the relationship between earning gaps and cast sizes in the performing arts. Most studies (Anderson et al. 1978; Baumol and Bowen, 1966; Baumol and Baumol (1985); Werck and Heynelds, 2007; Werck et al. 2008; Heilbrun, 2011) claim that reduced cast size helps coping with the cost disease. We found no empirical study that investigates the number of roles in theatre plays.

Baumol and Bowen (1965, 1966) Brooks (1997), and Last and Wetzel (2011) observe that the cost per unit of output in the live performing arts including live theatre has been increasing faster than that in the economy as a whole.

Baumol and Bowen (1966) give some historical evidence that the average cost per performance was £157 in the five-year period 1771–2 to 1775–6. They also estimated that the average cost per performance at the Royal Shakespeare Company in 1963–4 was £2139, that is, 13.6 times more than during the eighteenth-century, while over the same period, the general price level in England rose about 6.2 times. Costs went thus up more much faster than the general price level.

Davenport (2011), a Broadway producer, writes that musicals with casts over 30 have decreased over the last six decades. In the 1950s, 69% of all new musicals opening on Broadway had a cast size larger than 30. This percentage dropped to 67 % in the 1960s, 31 %, in the 1970s, 24%, in the 1980s, 38% in the 1990s, and 27 % in the 2000s.

Heilbrun (2011) states that one of arguments of Baumol and Baumol (1985) was that “one obvious way to suppress the cost disease is to cut down the number of artists the

performing organization has on its payroll. In the theater the obvious way to do so is to produce plays which call for small casts ...”. Heilbrun (2011) quotes Baumol and Baumol (1985) who show that average cast size for all non-musicals produced on Broadway fell from 15.8 in 1946–7 to 8.1 in 1977–8.

Theatre companies might prefer original plays with a small number of roles instead of giving artistic liberty to directors to shorten the cast in the original play by assigning multiple roles to one actor. This might reduce the cost, but also decrease the artistic quality of the original play. In the words of Alan Peacock (1996), “Removing Judge Bouck from the cast of Hedda Gabler would certainly reduce labour input to Ibsen’s masterpiece, but it would also destroy the product.” Therefore, we found it worth to investigate whether playwrights have written plays featuring smaller number of roles over time. If so, this implies that theatre as an art form has evolved into a situation in which new theatrical aesthetics is developed with smaller number of roles.

To the best of our knowledge, this paper is the first that explicitly uses the “number of roles” as an investigation unit. It tests whether playwrights feel the cost pressure and adjust accordingly.

Therefore this paper tests the following hypothesis:

H1: The number of roles in theatre plays has decreased over time.

We will also test a second hypothesis claiming that public subsidies given to theatres make them more flexible in their choice of repertoire, and put less emphasis on the number of roles (see Werck et al, 2008), thus:

H2: The number of roles is not the main criterion for what is produced in full subsidized Turkish State Theatres.

3. Data and statistical analysis

Before getting to the statistical analysis, it is worth to familiarize the reader with the structure of Turkish State Theatres (TST). TST is one of the important cultural institutions in Turkey since the beginning of the modern Turkish Republic. TST has many goals including promotion of westernization in Turkish culture. It has performed many important western plays over the last 80 years with a big administrative body and twelve branches now scattered all over the country. In fact, there is no corresponding cultural institution in any Middle Eastern country nor in Europe (Akdede , 2011). TST keeps the records of plays that were included into the repertory pool (Repertory archive) over the last 60 years. All the staff, including actors, directors and other design artists is appointed in their position for their lifetime (until legal retirement age). State theatres are also almost fully subsidized: Their earned income is equal to 4 percent of the total spending budget (Akdede, 2011). Every year many plays, both written in and translated to Turkish, are submitted to the drama department of TST to be evaluated and possible included in the repertory pool. Plays go through a very technical examination. Evaluations for acceptance are based on theatrical quality only. The number of roles is not a criterion for acceptance and there is no selection bias.

Descriptive statistics

The average total number of roles in 19th and 20th century playwrights is 14.28 and 10.97 respectively. The average total number of roles of playwrights born between 1900 and 1950 and between 1950 and 1993 are equal to 11.38 and 9.89 respectively. The average total number of roles is decreasing over time.

Table 1: Descriptive statistics. All plays

	Mean	Median	Max.	Min.	Std.Dev.	Obs.
Author's birth date						
Author birthday	1909.77	1928.50	1993.00	1458.00	74.43	2568
Fifteenth century						
Fifteenth century	0.00	0.00	1.00	0.00	0.04	2568
Sixteen century						
Sixteen century	0.02	0.00	1.00	0.00	0.14	2568
Seventeen century						
Seventeen century	0.01	0.00	1.00	0.00	0.11	2568
Eighteen century						
Eighteen century	0.01	0.00	1.00	0.00	0.11	2568
Nineteen century						
Nineteen century	0.17	0.00	1.00	0.00	0.38	2568
Twentieth century						
Twentieth century	0.78	1.00	1.00	0.00	0.41	2568
The number of roles						
Number of roles	11.68	10	63	1	8.48	2129
Gender and origin of the authors						
Female						
Female	0.10	0.00	1.00	0.00	0.30	2556
Male						
Male	0.90	1.00	1.00	0.00	0.30	2557
Turkish						
Turkish	0.51	1.00	1.00	0.00	0.50	2568
Anglo-Saxon						
Anglo-Saxon	0.18	0.00	1.00	0.00	0.38	2547
Former socialist country						
Former socialist country	0.10	0.00	1.00	0.00	0.30	2548
Genre of the plays						
Comedy						
Comedy	0.10	0.00	1.00	0.00	0.30	2568
Various plays (Several identifiers)						
Various plays (Several identifiers)	0.52	1.00	1.00	0.00	0.50	2568
Other Plays (with no identifier)						
Other Plays (with no identifier)	0.13	0.00	1.00	0.00	0.34	2568
Children plays						
Children plays	0.12	0.00	1.00	0.00	0.33	2568
Tragedy						
Tragedy	0.13	0.00	1.00	0.00	0.34	2568
Staged plays						
Staged plays	0.52	1.00	1.00	0.00	0.50	2568

Source: Authors' own derivation from the repertory of TST

Table 1 shows that TST has plays in its repertory with 11.68 roles on average. The maximum number of roles is 63 and the minimum is one. Seventy eight percent of plays are written by playwrights that were born during 20th century. We excluded antique playwrights (Euripides, Sophocles, Aristophanes, etc). The oldest playwright in the sample was born in 1458 and there is only one playwright from the fifteen century. The youngest playwright in our sample was born in 1993. Fifty two percent of the plays have already been produced. Ten percent of the playwrights are woman. Fifty one percent are

Turkish. TST classifies plays, in terms of their genre, as comedy, tragedy and drama, children play, and plays with many identifiers (Various Plays). “Various Plays” includes many titles classified by the TST as psychological text, historical text, modern play, documentary play, political play, experimental play, epic play, youth play, realistic play, and absurd play. The last category that TST classifies is plays with no identifier at all. Ten percent of plays are classified as comedy, 13 percent as tragedy or drama, 52 percent as plays with many identifiers, 12 percent as children plays, and 13 percent as plays with no identifier.

Table 2 provides statistics about plays that have already been produced/staged in one of the 12 branch theatres in TST. Table 2 shows very similar averages to those of Table 1. TST produced plays with 11.84 roles on average. Fifty one percent of produced plays are written by Turkish playwrights. Seventy seven percent of produced plays are written by playwrights that were born in the 20th century.

Before getting to our regression analysis and results, some descriptive statistics would be helpful to see that playwrights who lived in different centuries feature different numbers of roles on average. For example, plays in the TST, written in the 16th century have 20.23 roles on average, 12.27 roles in the 17th, 11.51 roles in the 18th century, 14.28 roles in the 19th century, and 10.97 roles in the 20th century. With the exception of the 19th century, the number of roles has been getting smaller over the time. The 19th century exception may be a result of the capitalist boom and the philanthropic achievement especially in the Western world. There are not many Turkish playwrights in our sample born in the 19th century: Modern Turkish playwriting started toward the end of 19th century and 20th century with the beginning of the modern secular Turkish Republic.

Table 2: Descriptive statistics. Produced plays

	Mean	Median	Max.	Min.	Std.Dev.	Obs.
<i>Author's birth date</i>						
Author's birthday	1905.11	1923.00	1993.00	1547.00	74.10	1326
Sixteenth	0.02	0.00	1.00	0.00	0.15	1326
Seventeenth	0.01	0.00	1.00	0.00	0.12	1326
Eighteenth	0.01	0.00	1.00	0.00	0.12	1326
Nineteenth	0.18	0.00	1.00	0.00	0.39	1326
Twentieth	0.77	1.00	1.00	0.00	0.42	1326
<i>The number of roles i</i>						
Number of roles	11.84	10.00	60.00	1.00	8.16	1125
<i>Gender and origin of the authors</i>						
Female	0.07	0.00	1.00	0.00	0.25	1320
Male	0.93	1.00	1.00	0.00	0.25	1320
Turkish	0.51	1.00	1.00	0.00	0.50	1326
<i>Genre of the plays</i>						
Comedies	0.10	0.00	1.00	0.00	0.29	1326
Various plays	0.62	1.00	1.00	0.00	0.49	1326
Other Plays	0.10	0.00	1.00	0.00	0.30	1326
Children plays	0.11	0.00	1.00	0.00	0.32	1326

Source: Authors' own derivation from the repertory of TST

Regression analysis and results

The number of roles is modelled as a function of birth date of playwrights and some other control variables listed in Tables 1 and 2 to check what determines the number of roles in a theatre play. We assume that playwrights want their plays to get produced. Therefore, they write plays that capture the audience's attention but also managers' concern about cost. Therefore, it would be reasonable to model the number of roles in a play as a function of some features of playwrights. The most objective feature about playwrights is their dates of birth, which is a convenient variable to test whether the number of roles is getting smaller over time.

Table 3: OLS Regression Results

	All playwrights		19 th and 20 th Century Playwrights		20 th Century Playwrights	
Dependent var.	Number of Roles					
	(1)		(2)		(3)	
	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.
Birthdate of playwright	-0.03***	0.00	-0.05***	0.01	-0.07***	0.01
Staged plays	0.20	0.37	0.05	0.38	-0.56	0.42
Female author	-2.72***	0.73	-2.56***	0.75	-1.45***	0.80
Turkish playwright	2.38***	0.53	2.36***	0.54	3.34***	0.56
Turkish and female playwrights	0.82	0.98	0.97	0.99	-0.16	1.02
Comedy	-3.58***	0.76	-3.56***	0.77	-3.05***	0.83
Various plays	-2.92***	0.68	-3.04***	0.69	-3.16***	0.71
Tragedy	-2.76***	0.77	-2.53***	0.77	-2.51***	0.80
Children plays	-3.82***	0.74	-3.32***	0.74	-3.38***	0.75
Playwrights from Anglo-saxon countries	-1.37*	0.53	-1.75***	0.57	-1.23**	0.60
Playwrights from former socialist countries	0.28	0.63	-0.49	0.65	0.09	0.71
Constant	65.12***	4.65	115.10***	11.07	156.64***	21.08
Adj-R Square	0.08		0.08		0.08	
F-stat. (prob.)	18.029 (0.000)		17.128 (0.000)		14.718 (0.000)	
No. of Obs.	2105		1993		1645	

***p<0.01, **p<0.05, *p<0.10

Table 4: Poisson Regression Results

	All playwrights		19 th and 20 th Century Playwrights		20 th Century Playwrights	
Dependent var.	Number of Roles					
	(1)		(2)		(3)	
	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.
Birthdate of Playwright	-0.002***	0.0001	-0.004***	0.0004	-0.01***	0.001
Staged plays	0.02	0.03	0.01	0.03	-0.05	0.04
Female author	-0.33***	0.09	-0.31***	0.09	-0.21*	0.11
Turkish playwright	0.20***	0.04	0.20***	0.05	0.30***	0.05
Turkish and female playwrights	0.16	0.11	0.17	0.11	0.07	0.12
Comedy	-0.29***	0.06	-0.30***	0.06	-0.25***	0.07
Various plays	-0.23***	0.05	-0.24***	0.05	-0.26***	0.05
Tragedy	-0.22***	0.06	-0.20***	0.06	-0.20***	0.07
Children plays	-0.31***	0.06	-0.27***	0.06	-0.28***	0.06
Playwrights from Anglo-saxon countries	-0.14***	0.05	-0.18***	0.06	-0.14**	0.07
Playwrights from former socialist countries	0.03	0.06	-0.04	0.06	0.01	0.07
Constant	6.43***	0.29	10.89***	0.84	15.58***	1.94
Adj-R Square	0.08		0.08		0.08	
LR stat. (prob.)	1072.76*** (0.000)		1065.41		923.19	
No. of Obs.	2105		1993		1645	

***p<0.01, **p<0.05, *p<0.10

Table 3 and Table 4 show the results of different regressions with the number of roles as the dependent variable. Table 3 gives the results obtained by Ordinary Least Squares (OLS), while Table 4 those obtained by Poisson regressions, since the number of roles is an integer variable that takes values between one and 63. With the exception of the date of birth, all the right hand-side variables are dummies. Although the interpretations of the coefficients are different, in terms of magnitude of the effects of date of birth of playwrights are negative and significantly different from zero in all cases.

This means that the number of roles is decreasing over time. Playwrights in earlier centuries or decades feature a larger number of roles. In particular, regression (3) in Table 3 shows that during the 20th century the downsizing reached 0.7 (10x0.07) roles per decade. We also find that plays with no identifier (the reference category which is omitted and picks a coefficient of 0) have larger number of roles. It is highly likely that musicals belong to this category. Musicals usually feature a larger number of roles. The results of Tables 3 and 4 show that we cannot reject the hypothesis H1 above.

It is worth mentioning that playwrights written in Anglo-Saxon countries feature significantly less roles. This may be the consequence of lower public subsidies to the performing arts than in other countries.

We also ran regressions for both Non-Turkish and Turkish playwrights separately. The results are listed in Table 5 below and are similar to those that were found in Tables 3 and 4. All playwrights (Non-Turkish and Turkish) in earlier centuries or decades wrote plays with a larger number of roles.

Table 5: OLS and Poisson Regression Results for Non-Turkish and Turkish Playwrights

Dependent var.	Non-Turkish Playwrights				Turkish Playwrights			
	Number of Roles							
	OLS		Poisson		OLS		Poisson	
	Coef.	Std. Err	Coef.	Std. Err	Coef.	Std. Err	Coef.	Std. Err
Birthdate of Playwright	-0,03***	0,002	-0,001***	7E-05	-0,04***	0,01	-0,002***	2E-04
Staged plays	0,08	0,49	0,01	0,02	0,24	0,57	0,02	0,02
Female author	-2,89***	0,69	-0,35***	0,05	-1,81***	0,68	-0,17***	0,03
Comedy	-3,96***	1,10	-0,36***	0,04	-3,16***	1,10	-0,23***	0,03
Various plays	-2,21**	1,04	-0,19***	0,03	-3,65***	0,89	-0,27***	0,02
Tragedy	-2,91**	1,12	-0,26***	0,04	-2,51**	1,07	-0,18***	0,03
Children plays	-1,89	1,36	-0,16***	0,05	-4,33***	0,91	-0,34***	0,03
Constant	61,39***	4,88	6,10***	0,15	87,59***	18,19	7,87***	0,54
Adj-Rsquared	0.11		0.10		0.04		0.04	
LR stat.			663.48***				321.07***	
F-Stat.	19.61***				8.07***			
No. of Obs.	1062				1060			

***p<0.01, **p<0.05, *p<0.10

In Table 6, we restrict the analysis to plays which were already produced/staged.

Table 6: Marginal effects of probit estimation.

	Regression (1)	Regression (2)	Regression (3)
	All Plays	19 and 20 Century Author Plays	20 Century Authors Plays
Dependent var.:	Staged=1 Not Staged=0	Staged=1 Not Staged=0	Staged=1 Not staged=0
	Marginal effect (z-stat.)	Marginal effect (z-stat.)	Marginal effect (z-stat.)
Number of roles	0.001 (0.77)	0.001 (0.77)	-0.002 (-1.34)
Female Author	-0.02 (-0.28)	-0.01 (-0.23)	-0.008 (-0.10)
Turkish Author	0.08*** (3.54)	0.08*** (3.50)	0.13*** (4.77)
Turkish Female Author	-0.22*** (-2.64)	-0.22*** (-2.64)	-0.20** (-2.14)
Comedy	0.11** (2.55)	0.12*** (2.72)	0.10** (2.12)
Various Plays (many identifiers)	0.24*** (7.16)	0.24*** (7.21)	0.22*** (5.91)
Drama Tragedy	-0.05 (-1.16)	-0.07* (-1.77)	-0.07 (-1.52)
Children plays	0.14*** (3.07)	0.13*** (2.87)	0.14*** (2.93)
Twenty century author	-0.08 (-1.08)	-0.05* (-1.69)	
Nineteen century author	-0.02 (-0.35)		
Eighteen century author	-0.06 (-0.58)		
Seventeen century author	0.04 (0.35)		
Birthdate of Playwright			-0.004*** (-6.50)
Pseudo R2	0.05	0.06	0.09
Wald χ^2 (Prob > χ^2)	149.14(0.00)	154.17(0.00)	188.89(0.00)
No. of Obs.	2122	2010	1660

***p<0.01, **p<0.05, *p<0.10

We use a probit model since the left-hand side is a binary variable that can take two values only: one for staged and 0 for not yet staged. The independent variables are the same as those used in Tables 3 and 4. The results show that number of roles does not seem to be of any importance for plays to get produced in fully subsidized TST. We can thus not reject hypothesis H2 either. It should be noticed that almost 97 percent of TST's budget is funded by the central government. Actors are life time employees of TST as mentioned earlier. Therefore, it would make sense that TST's main criterion for a play to be staged is not the number of roles. In a personal interview with managers of private theatres in Istanbul in February 2016, we however were told that one of the main criteria for a play to be staged in private theatres is the number of roles.

Comedies, as well as children plays and plays with several and no identifier (the reference set to 0) are more likely to get staged.

Table 7: OLS Regression results. Already staged 20th Century playwrights.

Dependent var.:	The Number of Roles	
	Coef.	t-stat.
Birthdate of playwright	-0.10***	-6.19
Female Author	-2.85***	-3.01
Turkish Author	3.77***	6.92
Turkish Female Author	2.24	1.50
Comedy	-3.06**	-2.51
Various Plays	-3.19***	-3.26
Children plays	-2.24*	-1.99
Drama Tragedy	-3.57***	-2.84
Constant	195.19***	6.55
R-squared	0.10	
F-Stat. (Prob.)	12.56(0.00)	
No. of Obs.	866	

***p<0.01, **p<0.05, *p<0.1

Table 7 shows the results of the regression that analyses the number of roles written by playwrights born in the 20th century for already staged plays only. They are very similar to the findings of the previous regressions in Tables 3 and 4, though the downsizing is somewhat larger: one less actor every ten years (10x0.10).

We found interesting to use the regressions coefficients to compute cost savings. We unfortunately have no information on the historic development of the average salary of a cast member in Turkey. Therefore, we collected average wage data by interviewing some private theatres in Istanbul. The average salary of actors per performance is roughly equal to US \$50 in February 2016.² In regression 3 of Table 3, we observe that the coefficient of birth date of playwright is equal to -0.07 and is statistically significant. This means that on average plays written today have 7 less roles compared to those written 100 years ago. Therefore, today $7 \times 50 = 350$ can be saved for one performance of a single play. The average ticket price in private theatres is \$15 and the average venue has a capacity size of 200 seats. Assuming that, on average, each performance attracts 100 people, the average revenue per performance amounts to \$1,500. The average rent per performance for the venue is roughly equal to \$300. Therefore a \$350 saving per performance might be important for private theatres since they also incur some fixed costs.

In Istanbul, 202 professional private theatre plays were performed between February 2016 and May 2016. Each play was shown 12 times.³ There were totally 2424

² State theatre actors get a fixed monthly salary regardless of the number of performances.

³ In terms of number of plays, private theatres dominate the theatre scene of Istanbul. During the same period, subsidized public theatre produced only 36 plays.

(12x202) private theatre performances, and total savings of \$848400 (=350x2424). There are also some savings in *sunk costs* here. Rehearsals take 6 weeks on average. During rehearsals, actors are paid a fixed salary, but private theatres were not willing to give this information out. However, we know that the monthly fixed salary of public theatre actors is around \$2,000. If we assume that private theatre actors would get the same salary per play (production) for rehearsal periods, private theatres would save \$14,000 (7 x 2,000) dollars per play as sunk cost, thus totally some \$2,8 million(14000 x 202). Adding the \$848400 of variable costs, this makes for a total of \$3,6 million for a half season and \$7,2 million for the whole season. This is a huge amount for private theatres since total government subsidy to all private theatres in Turkey in the 2014-2015 season was much less than \$7.2 million.

4. Conclusions

There is some empirical evidence that the number of roles in theatre plays has been getting smaller over time. One of the reasons is to lower the production costs. This downsizing does not seem to be a recent phenomenon. Instead, it is structural as our regressions analyze playwrights from many centuries.

As a policy recommendation, it can be suggested that if big productions are considered to be important for cultural policy makers, then theatre productions should be subsidized based on the cast size as well as the artistic quality of the plays.

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