

## *1. Introduction*

The administrative, social and legal environment for economic adjustment in Russian Federation in the 90s has displayed several pathologies: weak state regulation, a damaging version of corporate governance, weak protection of property rights, lack of trust in institutions and pervasive corruption. Regional governments and, intertwined with them, economic elites played an important part in these processes: public spending was wasteful, tax collection ineffective, they were widely involved in the embezzlement of public funds and propping up enterprises via use of money surrogates, barter, tax arrears and arrears to energy suppliers. One of the leading explanations of some of these pathologies is based on the theory of soft budget constraint put forward by Kornai (1980). His concept involves three main actors, softly restrained enterprises, their creditors and a 'paternalistic' state. Firms' willingness to run up debt, financed by creditors, is sustained by expectations concerning rescue by the state. The existence of this phenomenon is evident in all polities, though more vividly in transition economies; Maskin and Xu (2001, 10) show that the SBC syndrome continues to play an important role in economic life in all countries of Eastern Europe and the former Soviet Union, even those that have already undergone a long period of reform. In the paper I explore how soft budget constraint emerged and why they persist And, narrowing the focus, what are the factors enhancing the likelihood of the regional governments in the Russian to 'enjoy' SBC conditions?

The paper is divided into two sections, the first explores how federal fiscal relations were important for the behaviour of the regional governments, generating incentives and imposing constraint. The second examines the explanatory power of various variables in explaining the soft budget constraint experienced by some regional governments. I start by testing the argument put forward by Triesman, who studied what drives the pattern of budgetary relations in early 1990s, to the situation in 1996. Next, I run an analysis with my own of set of variables, potentially feasible for the question at hand.

## *2 Explaining diversity of fiscal performance*

### *2.1. Federal asymmetry of fiscal relations and soft budget constraint*

Central government in Russia has never given up the role of residual claimant: though it decentralized at some point the political authority to its lower units, it never decentralized the fiscal authority altogether. By defining the levels of taxation and the rules for calculating the tax base, especially VAT and profit tax, the central government could sufficiently influence the economies of the regions. The regions experienced limited fiscal autonomy, and even though they had discretion on other tax bases and tax rates, their borrowing powers were restricted by the federal centre<sup>1</sup>.

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<sup>1</sup> The July 1998 federal law 'On characteristics of the issue of and trade in municipal securities' sets limits for the amount of borrowing being no more than 30% of budget revenue excluding federal transfers, and states they are not guaranteed by the federal centre.

While the fiscal powers are mostly concentrated at the federal level, most of responsibilities for provision of public goods are delegated to the regional. Partly this can be explained by the situation in 1992-1993, when regional budgets were not running deficit, while the federal budget was deeply insolvent. It was understandable that in this situation the federal authorities pushed the spending responsibilities down to the regional level. The early reform government believed that the regional governments would be subject to self-imposed hard budget constraint, because, unlike the federal centre, they cannot print money. Over the years, however, they found various ways to spend more than they collected, including issuing regional bonds, bills of exchange (*veksels*), and using tax-offsets and combinations of transfers from off-budget funds (Hanson et al. 2000, 110). This situation can be explained by the argument that neither the balance of flows between the levels of government, nor the degree of decentralisation of fiscal relations can fully account for the differences in regional fiscal performance. More important are the conditions of soft budget constraint a particular region experienced.

The central argument in the literature (Kornai 1980, Besfamille and Lockwood 2004, Dewatripont and Maskin 1995, Kornai, Maskin and Roland 2003) is that soft budget constraint arise because politicians cannot commit not to refinance bad projects ex post and cannot distinguish bad from good ex ante. Robinson and Torvik (2006) argue that the reason for SBC to persist is that they serve the interests of politicians, and that the key thing about the soft budget constraint is that it is a credible way of transferring benefits to potential supporters. Their main observation that a policymaker cannot commit to enforce a hard budget constraint, but he can commit to make transfers to citizens, is applicable to the intergovernmental relations in the realm of fiscal relations. The requirement of the hard budget constraint (HBC),<sup>2</sup> or strict limitation of the revenue-sharing between the levels if the federation is to be market-preserving, has some important limitations for the Russian case. The extreme diversity of the Russian regions makes it virtually impossible to apply this requirement to a full extent; revenue sharing is thus institutionalised in the form of the Federal Fund for Support to Regions (FFSR) supposed to even out the economic and social inequality through equalising transfers. However, Weingast's (1995) concept of soft budget constraint goes beyond this narrow interpretation: it labels the propensity and capability of the regional governments to remove/ignore obligation to balance revenues and expenditures<sup>3</sup>. SBC conditions encompass, therefore, a recurrent pattern of the extra-constitutional revenue-sharing between the levels, and are

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<sup>2</sup> Weingast delineates five conditions of market-preserving federalism that include: (i) a hierarchy of governments with a delineated scope of authority (ii) the autonomy of each government is institutionalised in a manner that makes federalism's restrictions self-enforcing, (iii) the national government has authority to provide national public goods, in particular common market, and provide interstate commerce, (iv) all governments have hard budget constraint, (v) the sub-national government has primary authority over the economy within their jurisdictions: property law, civil law, etc. The condition regarding HBC in is not satisfied, and it explains not only why federalism, Russian style, is not market-preserving, but also provides an important analytical clue for understanding the differences in the performance between regional governments.

<sup>3</sup> According to Lavrov (1997) in 1996, regional budget revenues had grown by 1,38, while tax collections - by 1,43, the transfers and other revenue sharing between the levels of federation had grown by 1, 57 (Lavrov, 55).

characterised by governments' stable expectation of a central bailout in the event of insolvency.

Tracing the history of Russian fiscal policies, what is most striking is the selectivity with which the federal government treated its constituents. The dynamic of fiscal relations may reveal important tendencies in centre-periphery relations and illuminate some aspects of the behaviour of regional governments. In 1992-1993 republics and some regions sought to build up their sovereignty at the expense of a weakened centre. The parade of sovereignties starting from the case of Tatarstan in 1992, and was followed by the tax boycott in 1993, when more than thirty regions refused to remit the federal taxes collected in their regions to the centre. In the absence of credible threats, the federal centre had no other option than appease the regions that threatened secession or otherwise withheld support from the federal center. The years 1993 and 1994 were marked by an increase in federal budget transfers to the regions from 1.7 to 3.8 per cent of GDP and decentralization of the tax revenues from 54 to 47 per cent federal. Triesman's article, analyzed at length below, shows that these transfers were used as a tool in buying off those regions that had a previous record of declaring sovereignty, had a greater number of strikes and whose population had voted for the opposition on elections.

The federal Tax Ministry collects revenue from regions, and the fixed percentage of core taxes is transmitted to the federal budget. But these rules were by no means uniform, and several regions had forced the federal centre to concede more preferential rates. Occurrences of bailouts, and the existence of federal legal regulation on the procedure for granting tax concession to regions, all point to the fact that central government strives to fulfil its role as a residual claimant and take resources from some regions and bail out others. Following redistributive logic, it makes regional governments 'expend political energy trying to maximise what it obtains from the centre and minimising what it gives up' (Burawoy, 1996, 1107). The region that had better chance to win a bargain with the centre instead of investing in regional economic development sought to 'retain control over its own territorial resources even if it means concealing the amount it produces'.

## *2.2. Measurement of SBC*

The combination of the almost clandestine tax-sharing agreements and unclear rules for the federal budget transfers made it nearly impossible to achieve trust and agreement between regions and the centre. No clear division of responsibilities between the levels of the government was drawn and these responsibilities did not correspond with the revenue-raising powers. When these boundaries are blurred, and the level of responsibilities are not matched with powers to levy taxes, it was more rational for regions with greater relative bargaining power not to look downward to generate own resources, but to lobby the central authorities for tax benefits and transfers. The analysis of fiscal flows in the Russian case can disclose some tendencies and point to clues that are potentially useful for the research of SBC.

The first possible measure is whether a regional budget is deficient: regions that for several reasons secured themselves SBC conditions, usually run a significant *budgetary deficit*. Not only was this the result of the lack of effort to make ends meet, but often it was intentional on the part of regional governments. The soft budget constraint created incentives for regional governments to not avoid, but seek budgetary deficit, warranting the reasons for applying for prolongation of SBC conditions. This straightforward dichotomy, deficient and proficient regions, however does not yield a one-to-one dichotomy between regions experiencing soft or hard budget constraint. Several factors can be confounding, first and foremost, the structural differences between the regions stemming from economic centralisation and unfortunate geographical factors.

Taxes are composed of two main categories, first those where revenues are allocated to one level of government and those where revenues are shared between federal and regional governments. The division of revenues in the latter category is regulated by federal laws, but the actual division differed significantly from what is prescribed by law. Analysis of such disparities can yield useful insights into the nature of centre-periphery fiscal relations in general, and SBC conditions in particular.<sup>4</sup> For example, comparative analysis of the *share of the regional taxes in total tax collections* helps to detect the regions that were capable of forcing the federal centre to sign fiscal arrangements entitling them to retain larger tax shares (up to 100%), in contradiction to the general regulations. However, this estimation is not free from the influence of confounding factors. The first alternative explanation is that arrears on the shared taxes grew faster to the federal level due to the fact that regional governments had a possibility to attain their share of receipts via mutual offsets with regional enterprises, while federal government did not. Second, according to the regulation concerning the functions of the Federal Fund for Support of the Regions (FFSR), the federal share of receipt on VAT was, in several cases, allowed to stay in the region as an offset to an equalisation transfer.

The most frequently used indicator of asymmetry of inter-budgetary relations is the ratio of *inter-budgetary transfers to the tax collections*. This indicator is close to the indicator of net budgetary flows, calculated as tax remittance to the federal budget minus federal subventions, transfers, and loans, per capita. Both indicators are sensitive to the differences in stable expectation of granting SBC on the part of the regional government. The spread of the data for 1996's transfers to total regional tax collection, and the almost normal shape of the frequency distribution, allows for a robust statistical analysis, and makes it possible to base the analysis on the data from this year.

2.3 Testing the hypothesis of Triesman's work demonstrates that in the early 90s, challenging central government, either by the sovereignty declaration, public voting or mass strikes, paid off better than complaisance as far as the net budgetary flows<sup>5</sup> were

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<sup>4</sup> Only in 1996 more than 100 extra-constitutional fiscal documents signed toward such regions as Tul'skaya obl., Buryatia, Sakha, Dagestan, Komi, Kareliya, Kabardino-Balkaria, Tyva, Udmurtia, Kalmykiya, Karachaevo-Cherkessia, Tymenskaya and Kaliningradskaya obl., Kemerovskaya, Samarskaya obl., and Primorsky krai. Lavrov.

<sup>5</sup> Triesman uses the term 'net allocations' or 'net federal/central transfers', however the method of calculations identical to the above mentioned net budgetary flows (Lavrov's balances), 'per capita transfers to the regions net of tax payments to the centre' (Triesman, 1996, 308).

concerned. Several variables explaining the level of fiscal federal appeasements were found statistically significant, such as regionally concentrated mass strikes, popular vote against Yeltsin, and such estimator of credibility of secessionist threats as signing of sovereignty declaration in 1990. These variables were measured as for the 1992 year. To test the applicability of Triesman’s theory for the data on 1996, I repeated the analysis using the same variables, with few alterations. The importance of the fact that a region claimed its sovereignty status in 1990 for the degree of credibility of region’s threat, considerably faded by 1996, hence it was replaced with the other estimate that better captured this aspect of bargaining power in lobbying game, by ‘early signing of bi-lateral treaties’, assigning highest numbers for the regions who signed them as early as 1994. In addition, the popular vote against Yeltsin in 1991 was replaced with analogous measure in 1996. If his argument was correct, we would expect that presidential administration would try to shore up support for militant hostile regions by means of federal largess.

Table 1. Testing the determinants of higher net federal transfers  
Correlation analysis based on a sample of 87 Russian Regions, 1996

	net budgetary flows	log of the number of days on strike	early signing of bilateral treaties	popular vote against Yeltsin 1996
net budgetary flows	1	-.005	-.031	-.271(*)
log of the number of days on strike	-.005	1	.085	.166
early signing of bilateral treaties	-.031	.085	1	-.033
popular vote against Yeltsin 1996	-.271(*)	.166	-.033	1
	.011	.121	.759	

The results of the correlation analysis in table 1 show that the determinants of the bargaining power in the lobbying game, effective in 1992, by 1996 had lost their power. The only statistically significant correlation, that of the popular vote against Yeltsin in presidential elections in 1996, shows the sign opposite to that predicted by the hypothesis. Regions with greater share of population who voted against Yeltsin, received less per capita in transfers than their less challenging counterparts. Even though the statistical analysis exposed loss of explanatory power for particular variables, does this mean that the theory underpinning the construction of variables and model specification is wrong?

Triesman’s article is contributing to the growing literature applying the bargaining game theory to the specific aspects of political and economic processes in Russian Federation. Numerous authors have sought to explain why regions in Russian Federation have been allotted dissimilar sets of rights and obligations in the course of federal state-building utilized bargaining game theory for their analysis. They model centre-periphery

negotiations into ‘co-optation’ (Laitin 1991), ‘transgression’ (Solnick 1998a), or ‘appeasement’ (Triesman 1998) bargaining frameworks. Among other determinants of bargaining power, such as time preferences, risk acceptance, presence of alternative policies and coalitions, intensity of relative preferences, sequence of moves, etc., the most utilized by authors appear to be *credibility of threats*. Credibility of threats to disrupt economic or political integrity of Russia, indeed, seems to be widely used by resourceful regions in early and mid-1990s. While leaving the general theoretical underpinning intact, it would be interesting to refocus the attention away from the variables used in Triesman’s work towards other aspects of the regional threat to disrupt, distinct for the later period. The main focus of subsequent analysis will be concentrated on the role played by the public employment in centre-periphery bargain, and how it helped to boost bargaining power of individual regions.

### 3. *Public employment and soft budget constraint*

#### 3.1. *Choice of predictors*

As mentioned in the previous section, Triesman’s choice of variables, while applicable to inter-budgetary relation in the early 1990s, does not help to explain the interregional variation in net budget transfers in later periods. If Triesman was right that in the early 1990s regions which possessed resources for threatening the federal government were more successful in extracting tax concessions from Moscow, this does not seem to be what drove changes in the pattern of federal fiscal appeasement in mid 1990s. However, his hypothesis of the importance of the popular vote in presidential elections has been shown to sustain its explanatory power to the mid 1990s, though with an opposite sign. This variable shows significance at acceptable level in the previous iteration, and therefore it is worth keeping it for the analysis of the SBC.

2. Ethnic republics have had a different administrative status and political relationship with the centre from non-ethnic republics, which grants them with greater rights and privileges. These differences account for the different amounts of pressure they can bring to bear on the federal administration. Therefore, *ceteris paribus*, republican status should be inductive for the softening of budget constraint.

3. Russian regions exhibit a wide variation in the level of *public employment*, in 1996 the lower and upper limits of the range were 16 per cent for the Tumen oblast, and 30 per cent for Tyva republic. These figures represent the share of education, art, and science; health care and sport; and social protection (Goskomstat yearbook, 1996). The public employment trends can reasonably judged as being the outcome of the particular regional policy decisions, because most of the public employment has been created in the institutions, subordinated to regional governments and funded from the regional budget.

In 1990s Russia experienced a rapid large-scale process of privatization; as a result, employment in state owned enterprises dropped from four-fifths of the total employment in 1990 to one third in 1998. Against this background the figures for the public employment appear especially contradictory and irrational: the actual number of employees in healthcare, sport and social protection and public administration between

1992 and 1998 went up by 1.415 million (Gimpelson et al. 2000). One of the most common explanations of this phenomenon lies in the prevalence of socialist values over liberal values, of inertia and incompetence over efficiency and market-orientedness. These figures were accompanied by correspondingly increasing trends for wage arrears in public sector. Even though this also can be attributable to irresponsible, ineffective and incompetent budgeting by the federal centre, the alternative explanation, based on the dysfunctional game of centre-periphery relations has been framed in several works. Gimpelson provides evidence that regional governments deliberately inflated public employment and used the potential militancy of public employees in lobbying for more federal aid. Moreover, they methodically delayed payment, of wages in these sectors, even when earmarked funds had become available, in order to invigorate such militancy. These actions created prerequisites for the softening of budget constraints.

4. The examination of the determinants of the SBC would be incomplete without ‘supply side’ factors, driving intergovernmental allocation of budgetary resources. I include two variables that capture the regional ‘need’ for softening the budget constraint. Among Russian regions, a few are small, remote, backward in economic terms, and dramatically lacking in human capital to pursue independent economic and fiscal policy. Regions vary enormously with respect to the development of their industrial base, modernity, and living standards. In the foreseeable future, a majority of poor regions, such as Ingushetia, Dagestan, Tyva, Koryaksky, Chukotsky, Aginsky-Buryatsky okrugs would be recipients of the federal budgetary aid. The first measure is per capita gross regional product in 1996, and if it is correct that SBC are ‘supplied’ to ‘neediest’ regions, the expected association between this predictor and the outcome variable should be negative.

5. The failure in 1995-1996 to translate tight money into the elimination of SBC on producers can be attributable to the close link between governors and managers of large enterprises in the regions via hidden subsidies (non-monetary settlements, growth of arrears in both tax and energy payments). Moreover, by 1996, a large share of the enterprises which were still in state hands were low-profit and often insolvent enterprises, which stayed un-privatized mostly because of the lack of potential buyers (by the period under investigation the method of privatization was predominantly money privatization). The hypothesis to test here is whether the greater share of the state in industrial production and low level of net profit of the regional enterprises in the regional economy put pressure on the federal government to ‘alleviate need’, and redistribute the resources to the benefit of those regional governments with less ‘ability to pay’. If the pattern of SBC redistributes resources from more profitable regions, the correlation coefficient should be positive for the variable estimating share of state production and negative for net profit.

### *3.2. Results of the statistical analysis*

The correlation coefficients of these explanatory variables and their significance levels are displayed in Table 2 below. All the variables show expected signs of the correlation coefficients to SBC. Except for the popular vote against Yeltsin in presidential elections

in 1996, which is not significant, and GDP per capita which is significant at 0.05 level, all others are highly significant.

Table 2. Correlations between the determinants of soft budget constraint, based on a sample of 87 Russian Regions, 1996

	SBC	popular vote against Yeltsin	public employment	republican status	GRP per capita	share of state production	net profit of enterprises, log
SBC	1	-.165	.449(**)	.297(**)	-.272(*)	.612(**)	-.369(**)
popular vote against Yeltsin	-.165	1	-.488(**)	-.052	-.337(**)	-.172	-.044
public employment	.449(**)	-.488(**)	1	.429(**)	-.079	.374(**)	-.203
republican status	.297(**)	-.052	.429(**)	1	-.175	.277(*)	-.133
GRP per capita	-.272(*)	-.337(**)	-.079	-.175	1	-.233(*)	.317(**)
share of state production	.612(**)	-.172	.374(**)	.277(*)	-.233(*)	1	-.223(*)
net profit of enterprises, log	-.369(**)	-.044	-.203	-.133	.317(**)	-.223(*)	1
	.000	.685	.074	.219	.004	.048	

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

The most impressive result derived from Table 2 is that public employment had a highly significant impact on soft budget constraint. Higher public employment can very reliably predict the rising transfers and loans from the federal centre relative to collected tax. This result supports Gimpelson's hypothesis of the causal relationship between the public employment and SBC: "Governors may have consciously chosen to boost... local education, health and administrative payrolls in the hope of attracting greater federal financial aid'. Public employees were effectively 'hostages' who were used in fiscal bargaining with the federal centre. One of the key mechanisms of the softening of budget constraints was the mounting up of wage arrears in public establishments. The accumulation of overdue wages made the sector prone to strikes and facilitated their spread across the economy (Earle and Sabirianova, 1999). The federal authorities were vulnerable in the bargaining game against those regions who could threaten them with a likelihood and scale of strikes whose magnitude depended on the level of public employment. The undercurrent of this game as a game of subtracting conditions of SBC is supported by the fact that these transfers, earmarked for alleviating wage arrears were, more often than not, not used to the purpose. Governors had interests and means to keep some arrears unpaid, and instead invested part of the proceeds in inflating the public sector even more. The level of public employment also correlated highly with administrative status, results being significant at 0.001 level. This might cast some light

on the interpretation of the results from the related factorial analysis of variance, which I run as a follow-up of correlation analysis. For that I converted the values for the level of public employment into codes.<sup>6</sup>

Figure 1 here

The results reported in table 1.1 in figure 1 show that there is a highly significant main effect of both level of public employment and administrative status on the level of SBC,  $p < 0.005$  for both. There is an even more significant interaction effect between employment in public sector and republican status ( $F=11.659$  and  $p < 0.001$ ). The effect of public employment on the level of SBC was different for republics than for non-republics. Republican status, translated into greater bargaining power of the leaders of the region, was helpful in reaching the preferred outcome of bargaining, namely softening of the budget constraint, at a lower level for ethic republics than for non-republics. As figure 1 shows, a high level of SBC was achieved when a republic had 20-24% of public employees, while the other regions had to accumulate public employment higher than 24% in order to attain the same result.

The redistributive pattern of net federal transfers, as demonstrated earlier, followed the logic of the ‘neediest benefit most’ to a certain degree, as the level of the GRP per capita was negatively correlated with the level of SBC, this result being significant at 0.05 level. This finding is in line with the results reported by Kouznetsova et al.(1999), and Huerou and Rutkowski (1996) who also found evidence to show that equalising transfers from FFSR have had a redistributive effect. Though this variable shows an acceptable level association with the level of the SBC, the next variable is a better predictor of the dependent variable, exhibiting a higher level of significance,  $p < 0.001$ .

The profits of enterprises have demonstrated significance at a high level, and the corresponding correlation coefficient bears the expected sign. For the interpretation of this result it is worth making brief reference to the basic features of interregional fiscal relations. According to the Basic Principles of Taxation Law, the most important taxes are shared between the levels of the budgetary system, and the majority of the revenues on both federal and regional levels in 1996 came from shared taxes. The Table 3 show the break-down of the core taxes between the levels of the government as well as structure of the tax collections on the federal and regional levels.

Table 3 Official sharing rates of revenue from taxes and share of taxes in revenue

	Sharing rate		% of total tax revenues	
	Federal	Regional	Federal	Regional
VAT	75	25	46.5	16.5
Profit tax	37	63	14.9	25.2
Excises	50-100	50-100	20.7	3.2

<sup>6</sup> I assigned codes as follows: share of public employment < than 18% of the total employment was assigned code 1, between 18 and 20%-2, between 20 and 24%-3, and greater than 24%-4. This allocation was made in order to achieve better balanced design.

Personal income tax	10	90	2.3	20.2
Export import duties	100	0	10.4	0
Property tax	0	100	0	14.2
Other taxes			5.2	20.7

These figures emphasise the importance of profit tax for the regional budgets. In 1995 the share of this source in total tax collections was as high as 40%. In 1996, the year of the data collection for this paper, this share dropped to 25.2%, but it still accounts for the largest contribution to the regional budgets. Decline in the profits of the regional enterprises has a direct negative effect on the tax collections in this region, which created ‘supply side’ pressure on federal government to redistribute transfers to their benefit. As a follow-up I run related factorial ANOVA for analysis of effects of the proportion of state enterprises in the industrial production, public employment of the region and their interaction on the SBC. Besides this, I run separate ANOVA replacing the public employment variable with the variable for the administrative status. Results are schematized in figures 2 and 3 respectively.

Figures 2 and 3 here

As with the first iteration, republican status helped to achieve a greater level of SBC with lower levels of the other variable, while non-republics and cities of Moscow and St. Petersburg show little evidence of the presence of the interaction effect. The lines representing non-republics and big cities are almost flat, which indicates that there was almost uniform association between SBC and level of state production for all levels of public employment (see Figure 3). The analysis of Figure 2 exhibits an interesting interaction effect between the share of state enterprises in industrial production and public employment. Again, as with republican status, a greater share of state production is associated with greater effect of public employment on SBC. But the shape and relative position of the lines in Figure 3 suggests that this association is not straightforward. For the regions with high level of public employment, the effect of state production level was linear – the greater the production, the softer the budget constraint – but for the regions with level of public employment lower than 20%, this association was not linear: for the middle level of state production yields softer budget constraint. Regions that had the level of state production either lower than 5% or greater than 15% experienced harder budget constraints than the middle category.

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APPENDIX

Figure 1

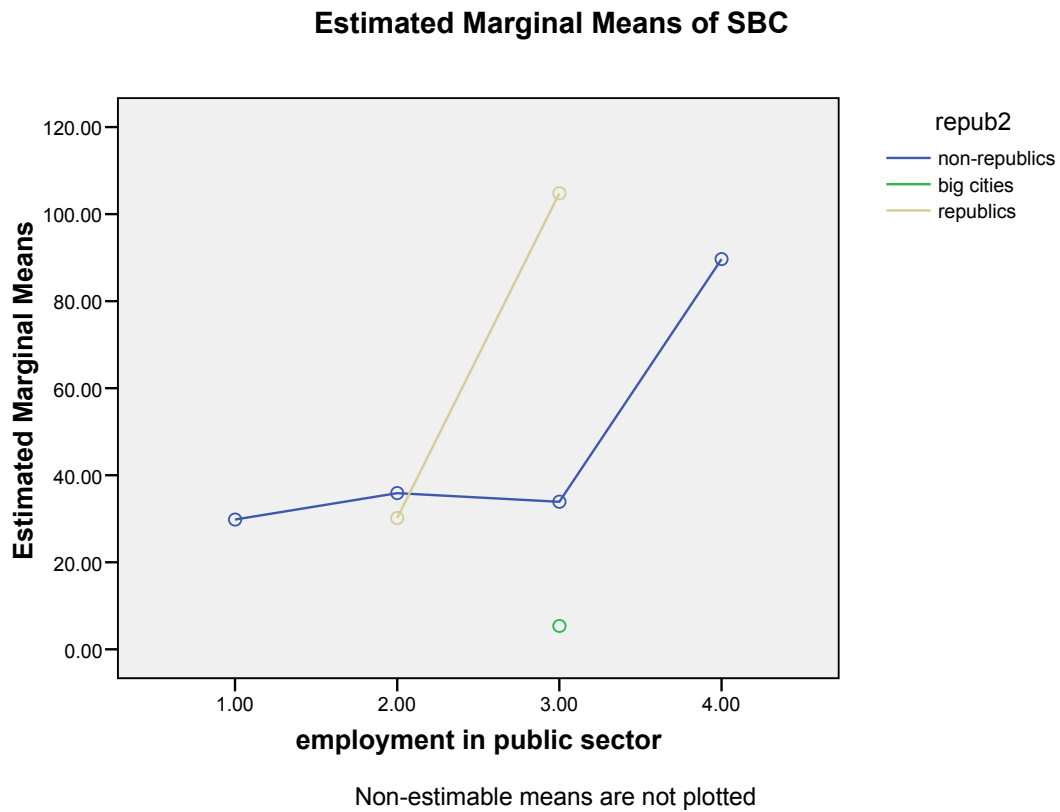


Table 1.1.

Dependent Variable: SBC

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	61323.901(a)	6	10220.650	7.757	.000
Intercept	29660.718	1	29660.718	22.510	.000
emplcode2	17975.125	3	5991.708	4.547	.006
repub2	18086.196	2	9043.098	6.863	.002
emplcode2 * repub2	15362.188	1	15362.188	11.659	.001
Error	92235.929	70	1317.656		
Total	308177.385	77			
Corrected Total	153559.831	76			

a R Squared = .399 (Adjusted R Squared = .348)

Figure 2.

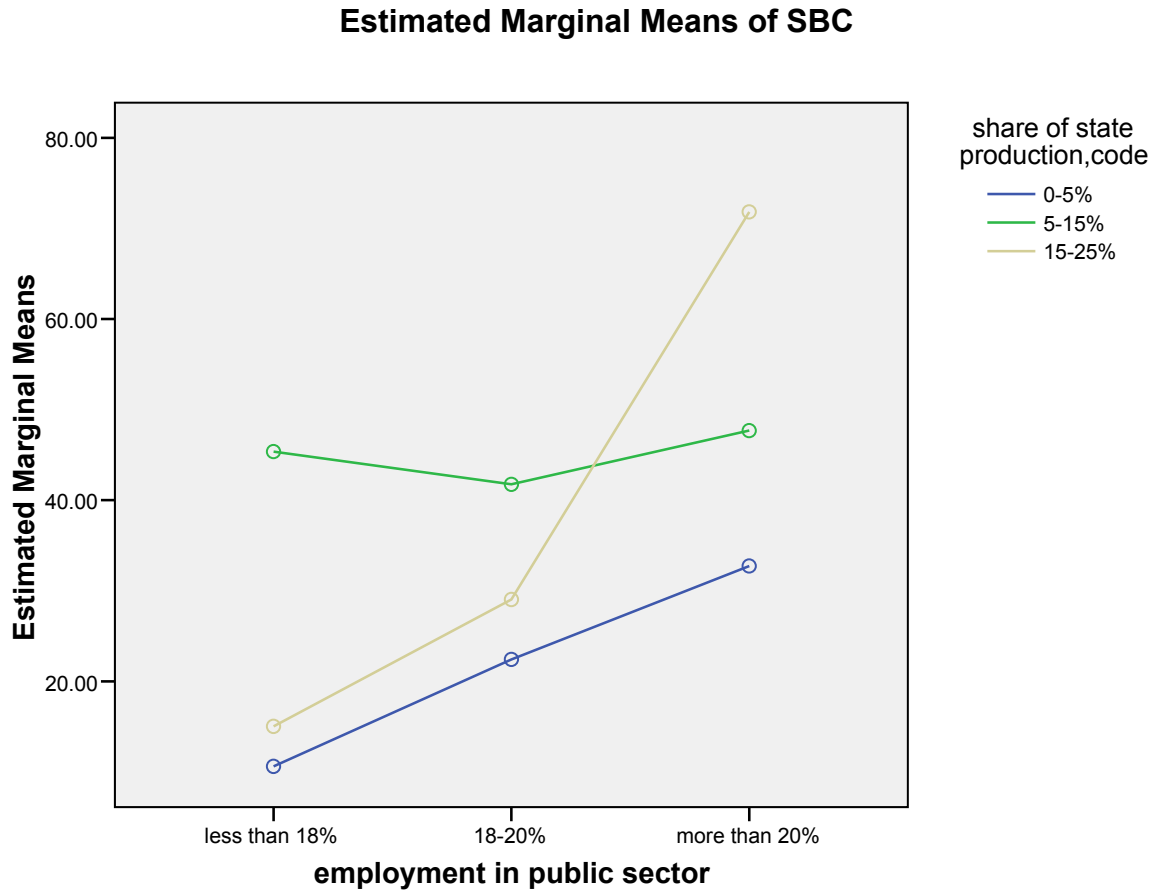


Table 2.1

Dependent Variable: SBC

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	26200.816(a)	8	3275.102	1.754	.101
Intercept	61052.600	1	61052.600	32.705	.000
stateprodcod	4788.075	2	2394.038	1.282	.284
emplcode2	7149.616	2	3574.808	1.915	.155
stateprodcod * emplcode2	7319.481	4	1829.870	.980	.424
Error	128806.911	69	1866.767		
Total	308219.809	78			
Corrected Total	155007.727	77			

a R Squared = .169 (Adjusted R Squared = .073)

Figure 3

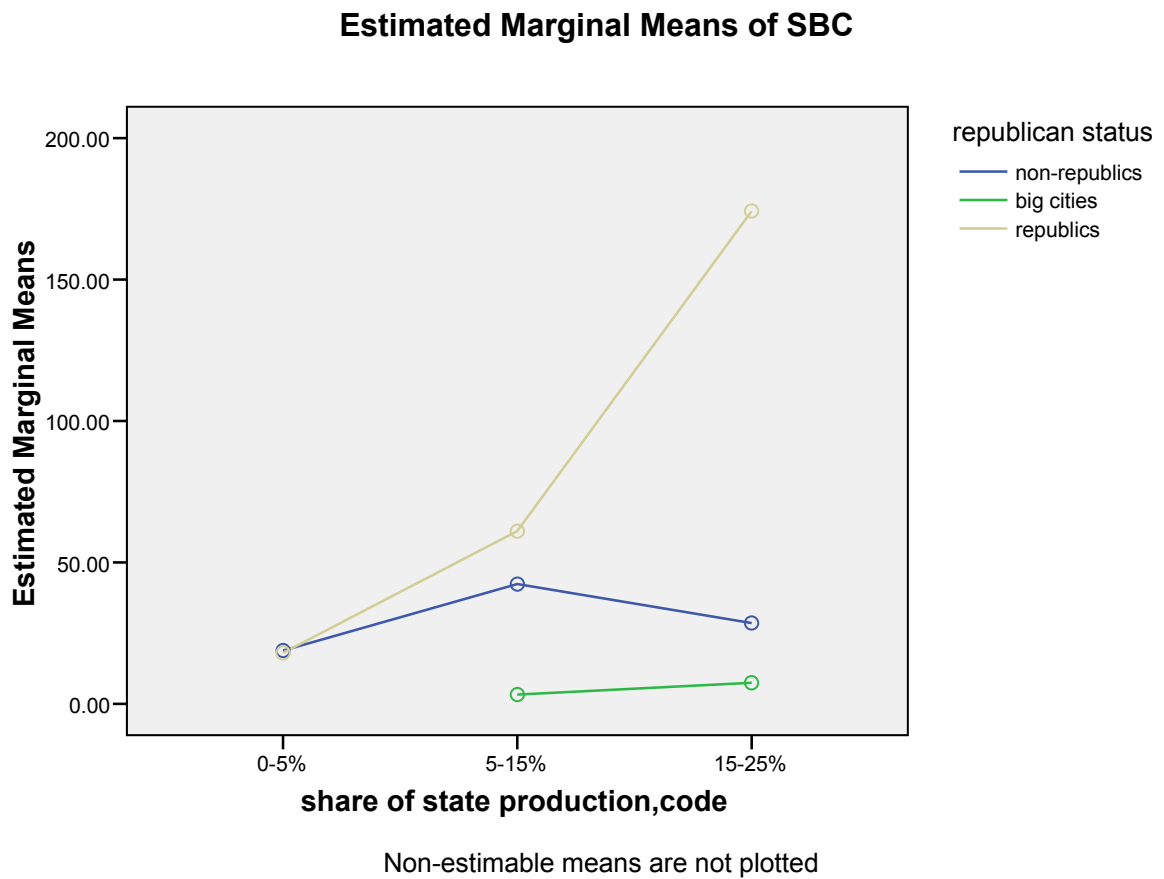


Table 3.1

Dependent Variable: SBC

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	150462.166(a)	7	21494.595	7.339	.000
Intercept	23216.070	1	23216.070	7.927	.006
stateprodcod	24401.715	2	12200.857	4.166	.020
repub2	37618.363	2	18809.181	6.423	.003
stateprodcod * repub2	56690.939	3	18896.980	6.453	.001
Error	205003.659	70	2928.624		

Total	555244.859	78			
Corrected Total	355465.824	77			

a R Squared = .423 (Adjusted R Squared = .366)