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## State Versus Market: The Case of Tobacco Consumption in Eastern European and Former Soviet Transition Economies

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## Abstract

Eastern European and former Soviet Union countries transitioned from command to market economy after the Cold War. The market was blamed for poor health consequences and increasing tobacco consumption throughout this shift. This study enters the state vs market debate by focusing on the state's function. A regression with fixed effects is run to study the correlation between foreign direct investments, as a proxy for the market, and state quality, as a proxy for the state, on tobacco consumption, as a component of development. Findings suggest that the state, not the market, may have influenced tobacco use and, consequently, development.

## Acronyms

BAT	British American Tobacco
CIS	Commonwealth of Independent States
CMEA	Council for Mutual Economic Cooperation
EU-8	Eight countries of Central and Eastern Europe
EEFSC	Eastern European and Former Soviet Countries
EU	European Union
FDI	Foreign Direct Investments
GDP	Gross Domestic Product
HDI	Human Development Index
IMF	International Monetary Fund
SDG	Sustainable Development Goal
SEE	South-eastern Europe
TC	Tobacco Consumption
TTC	Transnational Tobacco Companies
WB	World Bank
WTO	World Trade Organization

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integration, and as of 2005, were still not members of the World Trade Organization (WTO) (Brodman, 2005).

Figure 1: EEFS by Group Classification

EEFC by(Brodman, 2005)group classification. Dark red identifies CIS, normal red identifies SEE, light red identifies EEU

Overall, as a result of the shock therapy, in the early years of the transition, many countries in the EEFS adopted liberal import policies (Ahmad & Yang, 1998) by cutting tariffs and reducing or eliminating nontariff barriers (Brodman, 2005). On average, after the transition tariffs ranged from 3.3% to 11.6%, being favourable with respect to those of developing countries at comparable income levels (Brodman, 2005). In 2005, average tariffs on imports accounted for more than 25% of GDP, as compared to about 15% in 1994. However, despite the evidence reported by Brodman (2005), it has to be accounted that there is significant variation across EEFS and the year 1994, according to Metcalf (1997) evidence, could serve as a biased baseline year due to decreased interpublic trade. In terms of privatization, the former communist bloc saw the sale of 60,000 medium- and large-scale businesses and hundreds of thousands of small businesses to private owners in less than ten years (Gilmore, 2004a). This was almost ten times as many privatizations as were observed throughout the rest of the world in the previous ten years (Gilmore, 2004a).

### 2.2 FDI

), FDI in transition economies has been declining steadily since the early 1990s. In 2005, FDI inflows into transition economies were \$10.5 billion, or 0.3% of GDP, compared to \$100 billion, or 1.5% of GDP, in 1994. This decline is largely due to a strategy to promote the internationalisation of activities (Ahmed

FDI started growing particularly from the 1980s (Ahmed, 2013) (Drahokoupil, 2008), with an annual rate of growth of the stock of outwards FDI of 19.8% between 1986 and 1990 (Drahokoupil, 2008). This was the result of the effort of international financial institutions, most notably the WB, to promote economic governance that reflected neoliberal economic ideas (Drahokoupil, 2008).

In the former communist countries, there was virtually no FDI between the 1930s and the 1980s. In fact, the capitalistic motive of foreign investors could not be integrated in the communist ideology and in the central planning system of the USSR (Meyer & Pind, 1998). It was with the transition to a market economy (Meyer & Pind, 1998) (6 Y H W O L p L p 98), that FDI started to be made in considerable quantities by western multinationals.

Both the world trend of investing internationally and the need of the communist countries to transition to a market economy took shape in a general consensus on the need for these countries to attract FDI to achieve a successful transition (Bitzenis, 2009) (Drahokoupil, 2008). In reality, it was thought that FDI into transition economies may support economic expansion, encourage technological advancement, hasten corporate reorganization, and ease capital account burdens (Lewandowski, 1997) (Bevan & Estrin, 2004), such that FDI were considered as a developmental panacea for EEFSC and as a new Marshall plan (Drahokoupil, 2008).

Despite low initial investments in the area (Drahokoupil, 2008) due to a high perceived risk (King & Sznajder, 2006), multinational company started to see an opportunity in the ex-socialist economies because of the ability to satisfy the lack of consumer goods and to provide western brands, that were already well-recognized due to the high western media penetration (Tondel, 2001) (Bitzenis, 2009). Between 1994 and 2004 FDI had grown considerably faster than trade, leading some to argue that  $\mu \mu$  J O R E D O L V D W L R O R E I H S U R G L A E D W L R P Q T W K U R X J K W U D G H T T L C (Gilmore, 2005). These FDI flows were primarily coming from continental Europe, although the US (Tondel, 2001), Japan, and the UK (Bevan & Estrin, 2004) were also seen as significant global actors. Investments were particularly attracted by high GDP, transparent tax system, political and economic stability (Deacon, 2000), institutional infrastructure, as well as the bureaucracy and the local policies (Tondel, 2001) (Bevan & Estrin, 2004).



tobacco monopolies (Gilmore et al., 2011). However, liberalisation of inward investment has ultimately been more important than trade liberalisation

exposed to advertising before, so that people were more sensitive and responsive to it (Bobadilla et al., 1997).

The levels of cigarette advertising that resulted were phenomenal and took various shapes, ranging from slogans around cities, young brand representatives handing out free products, prizes and events (Grogan, 2006) (Kholmogorova & Prokhorov, 1994). By the mid 90s in at least four of the newly independent states TTC

the government of Kyrgyzstan that it would be the only domestic producer of cigarettes (Gilmore et al., 2011). 222.7.6210TJQq0.00000887.

The inability of the state to resist lobbying, with harmful purposes for citizens, influenced the ability of TTC to avoid regulations, penetrate the market, determine cigarettes prices and, as a result, to shape TC.

#### **2.4.2 Corruption and Criminality**

As recorded by Tondel (2001), there has been an increased extent of organised crime, corruption and informal economy in transition countries, allowed by the weakness of the state during transition. Corruption allowed TTC to shape the political levels (Danishevski et al., 2008), to impede the implementation of regulations. Criminality allowed TTC to secure smuggling as a way to increase consumption in the area (Bozicevic & Gilmore, 2003) (Gilmore, 2004a). In fact, smuggling was used as a business strategy of TTC to increase demand, undermine local firms to then acquire them cheaply and to argue the need for local manufacture (Gilmore, 2004a).

Control on corruption and criminality by the state could have been determinants of the ability of TTC to increase demand, decrease government revenues and undermine public he/F1 gQq0.000008871 0 595.32 841

avoided and undermined by TTC (Gilmore et al., 2011) (Hurt, 1995) (Ross, 2004). In fact, some bans did exist, but post-transition TTC exploited confusion over the legality of Soviet legislations to disregard them (Gilmore, 2004b) (Hurt, 1995) (Bobadilla et al., 1997) (Gilmore et al., 2011) (Danishevski et al., 2008). In 1995 in Hungary, for example, TTC had violated tobacco advertising bans in almost all media (Gilmore et al., 2011). Further, despite the ban on distribution of free cigarette samples, in Russia, 17% of students had been offered free cigarettes by company representatives (Ross, 2004). In addition, in Russia advertising of tobacco, despite a ban, was present on billboards and on television in Moscow (Bobadilla et al., 1997).

#### **2.4.5 Welfare**

When the state was not able to confront TTC at first, actions on the consequences could be implemented in supporting citizens with welfare. However, at the time most states were unstable and state building was in place, such that the welfare to citizens was low and the health system was weak. In the first ten years of the transition the welfare spending on average increased in western European countries while stagnated or decreased in Eurasia (Orenstein & Haas, 2002) (Deacon, 2000). In particular, in 1990 expenditures on health in Russia ranged from 3 to 4% of GDP as compared to the 8-9% in Western European countries, considering as well that Russian GDP was lower

inequality (Deacon, 2000) (Rechel et al., 2013) (UNDP, 1999) and increase in poverty (Tondel, 2001), even health deteriorated.

In fact since the 1990 it was recorded a dramatic decrease in life expectancy (Tondel, 2001)(Macura et al., 2005) (Bobadilla et al., 1997) (Shkolnikov et al., 1998) (Earle & Gehlbach, 2011) (Rechel et al., 2013), particularly accelerating in 1993 and 1994 (Meslé, 2004). This drop in life expectancy was mainly affecting male adults (King & Stuckler, 2007) and was attributable to accidents, homicides, suicides, alcohol poisoning (Bobadilla et al., 1997) (Shkolnikov et al., 1998) (Tondel, 2001) (Stuckler et al., 2009) (Leon et al., 2007) (Gavrilova et al., 2002), as well as circulatory and cardiovascular diseases (Bobadilla et al., 1997) (Tondel, 2001) (Shkolnikov et al., 2001). Circulatory and cardiovascular diseases were largely claimed by smoking (Bobadilla et al., 1997). According to the estimates, in one group of NIS countries about 25% to 30% of all male deaths and about one in two cancer deaths were due to smoking (Bobadilla et al., 1997). This was due both to the high TC of the EEFSC and the higher carcinogenicity of the sold products compared to the ones of the USA or Western Europe for the same brand (Bobadilla et al., 1997).

### **2.5.2 Determinants of the Outcomes According to the Literature**

The literature tends to attribute health outcomes largely to the market rather than the state. In fact, the decrease in life expectancy tends to be attributed to the shift to a market economy and its consequences. Stuckler et al. (2009) Bobak & Marmot (2009) Shkolnikov et al. (2001) Macura et al. (2005) identify as causes of the decline in life expectancy the strong economic crises, while King & Stuckler (2007) attribute it to mass privatization. Despite some papers identify the dismantling of institutions and public services, including health systems, as causes of decline in health (Stuckler et al., 2009) (Bobak & Marmot, 2009) (Meslé, 2004) (King & Stuckler, 2007) (Shkolnikov et al., 1998) (Meslé, 2004) (King & Stuckler, 2007) (Shkolnikov et al., 1998) (Macura et al., 2005), the phenomenon is still largely reconducted to mass privatization happening during the transition.

In terms of TC, the literature is even more skewed towards the market, because of the aggressive strategies of TTC and their exploitation of the transition to enter in EEFSC. The literature tends to find itself in agreement on an increase in production (Gilmore et al., 2011) (Ross, 2004) (Bobadilla et al., 1997) (Gilmore, 2004b), shift towards western products (Ross, 2004) (Hurt, 1995) and increase in consumption (Gilmore, 2004a) (Roberts et al., 2013) (Bobadilla et al., 1997) (Gilmore et al., 2011) (Perlman et al.

However, the literature, produced until 2013, suffered from lack of accurate and comparable data on TC (Gilmore et al., 2001) (Perlman et al., 2007) (Bobadilla et al., 1997). Results were based on rough estimates and small sample sizes (Bobadilla et al., 1997) (Perlman et al., 2007) (Bobak, 2006), on which it was difficult to establish whether FDI entrance entailed an increase in TC and whether in those years TC increased (Perlman et al., 2007).

### 3.Theoretical Framework

This research positions itself within the state versus market theoretical debate. However, while the state versus market debate arose in the 50s and was economic, development here is assumed to be closer to a Sen (2001) perspective and in a more holistic view. This adaptation of the debate is justified by a trend of growing attention to aspects of development which go beyond economic improvement and industrialization, but towards the provision of basic needs and individual betterment (Chang, 2009). This is supported even by the focus of the Sustainable Development Goals (SDGs) (UN, 2018)

D Q G W K H 8 1 ' 3 ¶ V K X P D Q G H Y H O R S P H Q W L Q G H [ + ' , R Q P R U H

As a result, the debate is adapted in this research to mean development in terms of health. This

D W W U L E X W L R Q R I G H Y H O R S P H Q W W R K H D Q W K L e v e l o p m e n t O L Q H E

L Q G L F D W R U V , Q I D F W D F F R U G L Q J W R 6 H Q ³ V X E V W D Q W

participation or the opportunity to receive basic education or health care) are among the constituent

F R P S R Q H Q W V R ( S e n 2 0 0 1 ) H O R S P H Q W m a n i s t i c a p p r o a c h ( C h a n g , 2 0 0 9 ) i s e v e n

supported by the focus on health of the SDGs and HDI. In addition, because TC is considered as a risk factor to health (WHO, 2021), TC can be considered as a component and proxy of development.

Figure 2: Process of Shift from Economic Development to TC



As a result, the state versus market debate would shape itself in determining whether it is the market forces or the state ones to shape TC, which affects health, which is a component of development. Since in this research the dichotomy of the state and market is not conceived only in economic terms, an interventionist states acts on more spheres other than import substitution, trade policies or tariffs, but also in terms of softening the effects of a free market on other developmental spheres.

Setting this debate as the lens through which to read the literature on TC in transition countries, most of the papers (paragraph 2.5.2 W R W K H E H V W R I W K H D X W K R U ¶ V N Q R Z O H

the side of the market. In fact, in the existing literature the state has not been considered as a main driver of TC in the considered context.

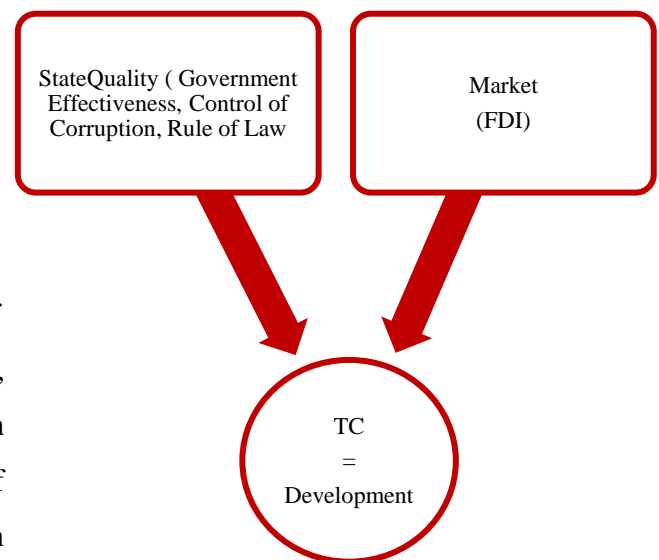
## 4. Research Aims

Despite the reasonable focus on the market, after years of solely presence of the state, this paper argues that the responsibility of the state during the transition has been largely undermined. In fact, while development outcomes, either positive or negative, are attributed in large part to the market economy, the state could have played a large role in shaping them, as explained in paragraph 2.4. Through the case study of transition economies of EEFSC, the aim is to test the state vs market theories with a new development lens. In fact, the transition economies offer a good scenario of a shift from a total presence of the state to the presence of the market which provides an interesting setting for the debate. As a result, this research wishes to answer the following research question: to what extent the market or the state have influenced TC during the transition in EEFSC?

The research question is answered by running a regression which studies the correlation between TC and state and market forces. The regression has been chosen as an appropriate methodology to test the correlations of the market and the state on the dependent variable and to quantify them. The market is studied in terms of FDI, which have been one of the main phenomena of trade liberalization and, hence, free market forces. The state is studied in terms of government effectiveness, control of corruption and rule of law. In fact, as highlighted in paragraph 2.4, it was mainly through the ability to implement policies, having control on corruption and having strong legislative and executive power, that the state could shape TC.

In addition, this research seeks to analyse data using a new dataset created in 2019, which overcomes some of the data issues that have shaped past research.

Figure 3: Potential Process of Causation



## 5. Data and Methodology

### 5.1 Data

The variables considered for the model are TC, FDI, State, GDP, and Price.

TC is the dependent variable and a proxy of development, since it represents how spread is the tobacco epidemic, not only in terms of smokers but also in terms of quantity. The TC variable is measured in terms of cigarettes consumed yearly per capita by the population. Data on TC per Capita was collected from Hoffman et al. (2019) database.

FDI is the independent variable and is a proxy of the market. FDI is considered no matter its origin



this variable. Price of Tobacco is an index estimated using a sample of prices for a defined set of goods from tobacco, setting 2010 as a base year for determining the price index. Data on tobacco price was obtained from Euromonitor International (2022).

GDP and Tobacco Price are not considered as proxies of the market, since they are macroeconomic variables that have the same base in all states and that include aspects not related to the market. In fact, GDP is composed of consumption, government expenditure, exports, and imports. Even prices are not determined only by the market, but as well by business strategies and government regulations. As a result, these variables can not be proxies neither of the state or the market but serve as control variables.

## 5.2

WHO Convention on Tobacco Control, but the convention was not yet entered into force and not yet ratified by countr

characteristics that related to TC. The choice was even confirmed by the use of the fixed effects model in similar research (Mendez Lopez et al., 2017) (Chaloupka & Laixuthai, 1996) and by the Hausman (1978) specification test (table 4). In addition, this model would be able to overcome the mistakes that Gerry et al. (2010) identified in Stuckler et al. (2009) paper, which studied the impact of privatization on life expectancy in transition countries .

The resulting equation of the regression would be as follow

Equation 1: Regression Equation with Variables

$$TC_{it} = \beta_0 + \beta_1 FDI_{it} + \beta_2 FDI_{it}^2 + \beta_3 FDI_{it}^3 + \beta_4 FDI_{it}^4 + \beta_5 FDI_{it}^5 + \beta_6 FDI_{it}^6 + \beta_7 FDI_{it}^7 + \beta_8 FDI_{it}^8 + \beta_9 FDI_{it}^9 + \beta_{10} FDI_{it}^{10} + \beta_{11} FDI_{it}^{11} + \beta_{12} FDI_{it}^{12} + \beta_{13} FDI_{it}^{13} + \beta_{14} FDI_{it}^{14} + \beta_{15} FDI_{it}^{15} + \beta_{16} FDI_{it}^{16} + \beta_{17} FDI_{it}^{17} + \beta_{18} FDI_{it}^{18} + \beta_{19} FDI_{it}^{19} + \beta_{20} FDI_{it}^{20} + \beta_{21} FDI_{it}^{21} + \beta_{22} FDI_{it}^{22} + \beta_{23} FDI_{it}^{23} + \beta_{24} FDI_{it}^{24} + \beta_{25} FDI_{it}^{25} + \beta_{26} FDI_{it}^{26} + \beta_{27} FDI_{it}^{27} + \beta_{28} FDI_{it}^{28} + \beta_{29} FDI_{it}^{29} + \beta_{30} FDI_{it}^{30} + \beta_{31} FDI_{it}^{31} + \beta_{32} FDI_{it}^{32} + \beta_{33} FDI_{it}^{33} + \beta_{34} FDI_{it}^{34} + \beta_{35} FDI_{it}^{35} + \beta_{36} FDI_{it}^{36} + \beta_{37} FDI_{it}^{37} + \beta_{38} FDI_{it}^{38} + \beta_{39} FDI_{it}^{39} + \beta_{40} FDI_{it}^{40} + \beta_{41} FDI_{it}^{41} + \beta_{42} FDI_{it}^{42} + \beta_{43} FDI_{it}^{43} + \beta_{44} FDI_{it}^{44} + \beta_{45} FDI_{it}^{45} + \beta_{46} FDI_{it}^{46} + \beta_{47} FDI_{it}^{47} + \beta_{48} FDI_{it}^{48} + \beta_{49} FDI_{it}^{49} + \beta_{50} FDI_{it}^{50} + \beta_{51} FDI_{it}^{51} + \beta_{52} FDI_{it}^{52} + \beta_{53} FDI_{it}^{53} + \beta_{54} FDI_{it}^{54} + \beta_{55} FDI_{it}^{55} + \beta_{56} FDI_{it}^{56} + \beta_{57} FDI_{it}^{57} + \beta_{58} FDI_{it}^{58} + \beta_{59} FDI_{it}^{59} + \beta_{60} FDI_{it}^{60} + \beta_{61} FDI_{it}^{61} + \beta_{62} FDI_{it}^{62} + \beta_{63} FDI_{it}^{63} + \beta_{64} FDI_{it}^{64} + \beta_{65} FDI_{it}^{65} + \beta_{66} FDI_{it}^{66} + \beta_{67} FDI_{it}^{67} + \beta_{68} FDI_{it}^{68} + \beta_{69} FDI_{it}^{69} + \beta_{70} FDI_{it}^{70} + \beta_{71} FDI_{it}^{71} + \beta_{72} FDI_{it}^{72} + \beta_{73} FDI_{it}^{73} + \beta_{74} FDI_{it}^{74} + \beta_{75} FDI_{it}^{75} + \beta_{76} FDI_{it}^{76} + \beta_{77} FDI_{it}^{77} + \beta_{78} FDI_{it}^{78} + \beta_{79} FDI_{it}^{79} + \beta_{80} FDI_{it}^{80} + \beta_{81} FDI_{it}^{81} + \beta_{82} FDI_{it}^{82} + \beta_{83} FDI_{it}^{83} + \beta_{84} FDI_{it}^{84} + \beta_{85} FDI_{it}^{85} + \beta_{86} FDI_{it}^{86} + \beta_{87} FDI_{it}^{87} + \beta_{88} FDI_{it}^{88} + \beta_{89} FDI_{it}^{89} + \beta_{90} FDI_{it}^{90} + \beta_{91} FDI_{it}^{91} + \beta_{92} FDI_{it}^{92} + \beta_{93} FDI_{it}^{93} + \beta_{94} FDI_{it}^{94} + \beta_{95} FDI_{it}^{95} + \beta_{96} FDI_{it}^{96} + \beta_{97} FDI_{it}^{97} + \beta_{98} FDI_{it}^{98} + \beta_{99} FDI_{it}^{99} + \beta_{100} FDI_{it}^{100} + \epsilon_{it}$$

Where i is the country and t is the year. TC is TC per capita in quantities, FDI are FDI per capita in quantities, FDI<sup>2</sup> are FDI per capita squared, FDI<sup>3</sup> are FDI per capita cubed, FDI<sup>4</sup> are FDI per capita to the power of 4, FDI<sup>5</sup> are FDI per capita to the power of 5, FDI<sup>6</sup> are FDI per capita to the power of 6, FDI<sup>7</sup> are FDI per capita to the power of 7, FDI<sup>8</sup> are FDI per capita to the power of 8, FDI<sup>9</sup> are FDI per capita to the power of 9, FDI<sup>10</sup> are FDI per capita to the power of 10, FDI<sup>11</sup> are FDI per capita to the power of 11, FDI<sup>12</sup> are FDI per capita to the power of 12, FDI<sup>13</sup> are FDI per capita to the power of 13, FDI<sup>14</sup> are FDI per capita to the power of 14, FDI<sup>15</sup> are FDI per capita to the power of 15, FDI<sup>16</sup> are FDI per capita to the power of 16, FDI<sup>17</sup> are FDI per capita to the power of 17, FDI<sup>18</sup> are FDI per capita to the power of 18, 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Table2: Descriptive Statistics

Descriptive Statistics									
Variables	Obs	Mean	Std. Dev.	Min	Max	p1	p99	Skew.	Kurt.
TC	204	223.976	65.552	32.5	393	62.4	361.9	-.142	3.18
FDI	229	214.703	287.08	0	1940.365	.481	1386.144	2.789	12.743
GDP	280	6076.195	3633.031	735.87	17799.35	762.08	16743.23	.924	3.422
Price	269	30.384	23.276	0	99.3	0	95.2	.417	2.537
State	280	-.04	.413	-1.188	1.099	-1.152	.994	-.401	4.514

### 6.1.2 Correlation

The pairwise correlation shows that TC is slightly correlated with the State and GDP, while not with FDI and Price. In addition, Price seems, even if not significantly, negatively correlated, meaning that a lower price would entail slightly lower TC. Another interesting aspect is that here the State is positively correlated with TC, meaning that a better state would have higher TC. However, despite the useful insight of these preliminary evidence, these results are not statistically appropriate to draw conclusions on the research questions.

This correlation is useful to control for issues of multicollinearity between explanatory variables. There exists a correlation between FDI and the other explanatory variables, which can be explained by the self-selection of investments. In fact, countries performing well were likely to attract more investments (Deacon, 2000) (Tondel, 2001) (Bevan & Estrin, 2004). In addition, the correlation between FDI and GDP can even be explained by the fact that countries with higher GDP would require higher investments. There exists a correlation between GDP and Price, which can be explained by higher cigarettes prices in wealthier contexts. The correlation between GDP and the State can be explained by the fact that well performing states tend to be richer. While there are some correlations among explanatory variables, especially GDP and FDI, correlations are always lower than 0.6, not representing an issue for the regression analysis.

Table3: Pairwise Correlation

Pairwise correlations					
Variables	(1) TC	(2) FDI	(3) GDP	(4) Price	(5) State
(1) TC	1.000				
(2) FDI	0.012	1.000			
(3) GDP	0.235*	0.545*	1.000		
(4) Price	-0.086	0.371*	0.135*	1.000	
(5) State	0.191*	0.356*	0.533*	-0.019	1.000

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

### 6.1.3 Robustness Check

Robustness checks are conducted prior running the regression to control for the choice of the model. Fixed effects estimators are preferred to correct for country-specific conditions that could influence TC, as supported by Hausman (1978) test (table 4). Results confirm the need for more conservative

fixed effects estimates as compared to the random ones. In fact, since the p-value is 0 we can reject the null hypothesis, where the null hypothesis is accepting random effects, while the alternative hypothesis is accepting fixed effects.

Table4: Hausman Specification Test

<b>Hausman (1978) specification test</b>	
	Coef.
Chi-square test value	33.579
P-value	0

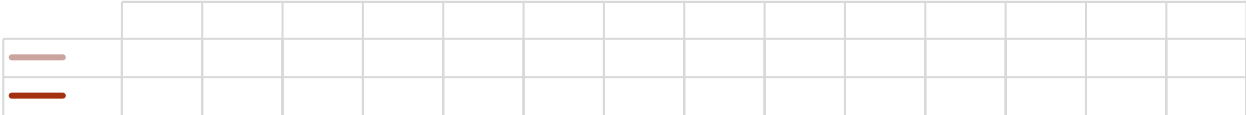
## 6.2 Trends and Subgroups Characteristics

### 6.2.1 TC

Despite the literature reporting an increase in TC in the years after the transition, the dataset of Hoffman et al. (2019) allows us to observe a different trend. In fact, TC, on average, has decreased in transition countries after 1990 (figure 7). In fact, in 1990 the TC average was 264 cigarettes, to

implement regulations despite a strong influence and investment of TTC in the area, which would have forecasted an increase of TC in the area by 10-20% (DWR V, 2016) (HWD 1990) the Hungarian government launched a health awareness campaign and in 1995 and 1999 passed tobacco legislations (DWR V, 2016) (HWD al., 2014) (DWR V, 2016) (HWD O

Figure 5: TC by Subgroups of Countries 1990-2003



Data Source Hoffman et al. (2019)

Figure 6: TC Years Average per Country 1990-2003

Data Source Hoffman et al. (2019)





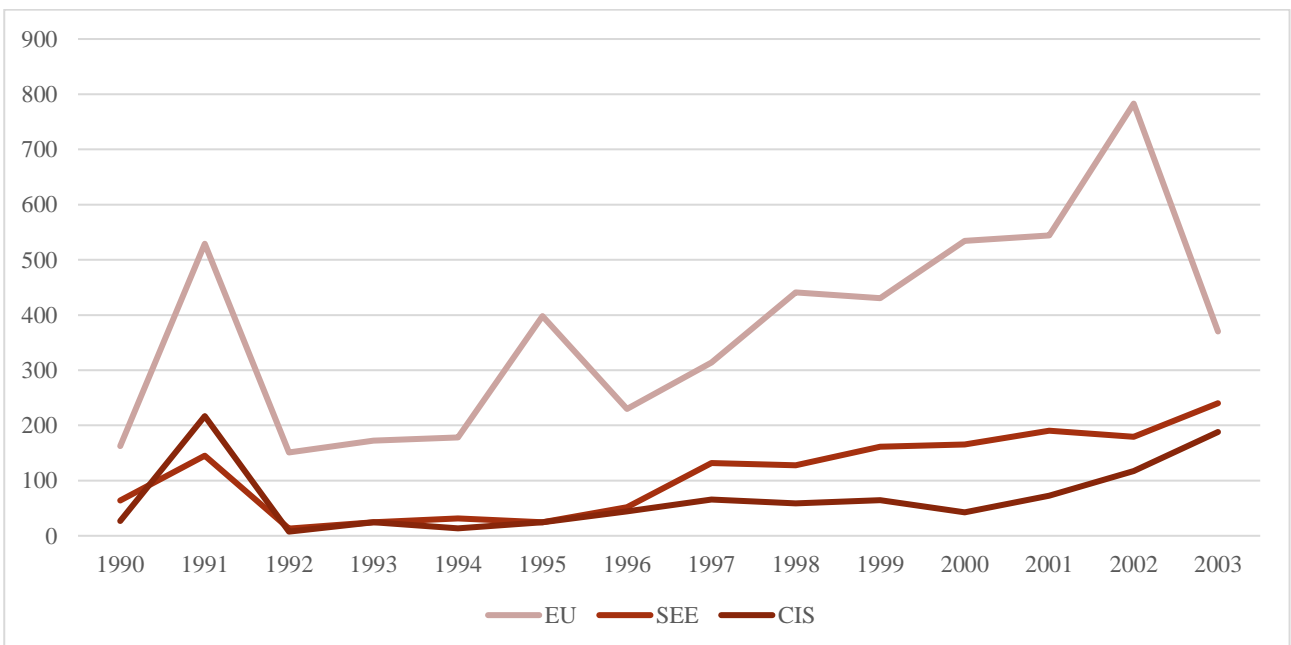
Comparing FDI trends to the tobacco ones, it is possible to notice that the group of countries that received more investments at first were the ones with higher tobacco per capita, that is the EU-8. However, the tobacco and FDI trends tend to be dissimilar in their shapes.

Figure 8: FDI per Country 1990-2003



Data Source: Euromonitor International 2022

Figure 9: FDI by Subgroups of Countries 1990-2003



Data Source: Euromonitor International 2022

Figure 10: FDI Years Average per Country 1990-2003

Data Source: Euromonitor International 2022

Figure 11: FDI Country Average per Year

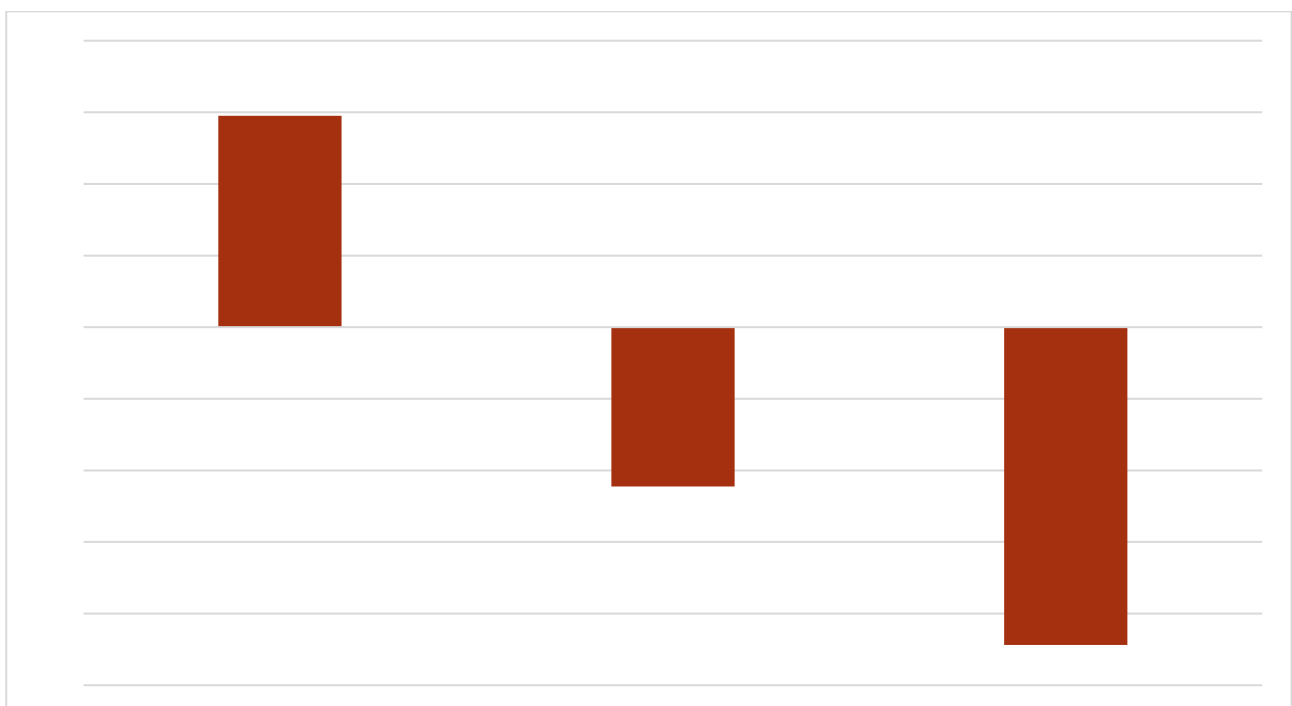
Data Source: Euromonitor International 2022

### 6.2.3 State

For state quality, different graphs are studied since they are considered more explicative because of missing data issues. Countries with higher state quality are EU-8, which is the only group that on average between 1996 and 2003 stood above 0, where CIS scored the lowest grade (figure 12). Looking at the specific countries who perform best (figure 13), these are all EU-8: Czech Republic, Estonia, Hungary, Poland, and Slovenia. These countries performed particularly well in terms of government effectiveness and rule of law. Comparing this score with the tobacco control performance, it is possible to observe that these countries performed quite well even in terms of tobacco legislations. In fact, these countries, except for Czech Republic, were stronger in terms of enacting tobacco control (Joossens & Raw, 2007). Czech Republic represents an exception in terms of tobacco legislation because it had a strong industry presence and strong negative attitude towards tobacco control.

On the other hand, Azerbaijan, Kazakhstan, Serbia, and Ukraine are the worst performing countries. These countries fared very poorly in terms of control of corruption and rule of law. The low performance in Azerbaijan and Kazakhstan can be explained by their richness in natural resources and because of their autocratic nature (Gilmore, 2004b) (Brodman, 2005) (Meyer & Pind, 1998). Low grade for Serbia can be accounted for by the political conflicts, for its state definition and independence, that prevailed throughout the time period under consideration. Ukraine's low rating can be attributed to the country's lack of political stability, rise in corruption, and significant economic downturn following the end of communism.

Figure 12: State Quality by Subgroups of Countries 1996-2003



Data Source: WB 2022

Figure 13: State Quality Year Average per Country 1990-2003

Data Source: WB 2022

The number of considered states in the panel data fixed effects regression is equal to 20. The considered variables are 5 and the number of observations is equal to 185. The regression analysis overall is valid with a F close to 0. The resulting regression equation would be as follow

Equation 2: Regression Equation with Coefficients

$$6\% \text{ } \beta_0 + \beta_1 \text{ FDI} + \beta_2 \text{ FDI}^2 + \beta_3 \text{ FDI}^3 + \beta_4 \text{ FDI}^4 + \beta_5 \text{ FDI}^5 + \beta_6 \text{ FDI}^6 + \beta_7 \text{ FDI}^7 + \beta_8 \text{ FDI}^8 + \beta_9 \text{ FDI}^9 + \beta_{10} \text{ FDI}^{10} + \beta_{11} \text{ FDI}^{11} + \beta_{12} \text{ FDI}^{12} + \beta_{13} \text{ FDI}^{13} + \beta_{14} \text{ FDI}^{14} + \beta_{15} \text{ FDI}^{15} + \beta_{16} \text{ FDI}^{16} + \beta_{17} \text{ FDI}^{17} + \beta_{18} \text{ FDI}^{18} + \beta_{19} \text{ FDI}^{19} + \beta_{20} \text{ FDI}^{20}$$

**6.3.1 The Impact of FDI on TC**

FDI seem to have a negative effect on TC (-0.00460), but this has no effects on our regression since it is not significant at a 90% confidence interval. This result means that opening to FDI did not have a significant effect in driving up TC. This result was overall supported even by the graphs which showed an overall increase in FDI not corresponded by an overall increase in TC. This means that, even if TTC entered in the market in transitioning countries through FDI, it has not been the market liberalization per se, happening through FDI, to lead to TC. In fact, some countries that attracted

controls in most affected countries. Price inelasticity is observed, of which an example is Russia where in 2000 tobacco taxes were increased by 100% (Ross, 2004), but consumption still increased by 3,6% between 2000 and 2001 and by 5,9% between 2001 and 2002 (Hoffman et al., 2019).

## **7. Policy Implications**

and compliance with the SDG 17.18 on the development of better statistical systems (UN, 2018). Collection of data through surveys (Skafida et al., 2014), and surveillance are needed to provide accurate and comparable data on TC, smoking prevalence, knowledge and attitudes about smoking, mortality and morbidity data, which can capture as well the consumption of smuggled products.

## 8.Limitations

The empirical results are to be considered with limitations coming from data availability and the research design. The availability of data for the purpose of the research was limited, as observed even by previous researchers (Gilmore et al., 2001) (Perlman et al., 2007) (Bobadilla et al., 1997) (Bobak, 2006). In fact, the data on TC of Hoffman et al. (2019), despite its reliability as compared to other available data, still suffered from the lack of data from national statistical agencies and relied on the accuracy and precision of each country ¶ data collection. The dataset was only able to capture tobacco under the form of cigarettes, disregarding other forms of consumption like chewing tobacco (Hoffman et al., 2019). In addition, data might underestimate smuggling in the considered countries, which according to (Ross, 2004) ranges around 4% or 5% of the foreign cigarettes market. In addition, the dataset has not considered six countries of the CIS, creating a limitation for the empirical results. In terms of state quality variable, the index missed data for some years. Even if the state quality does not have much intra country fluctuation as an index, this represents still a limitation.

In terms of research design, first the wish to consider all Eurasian transition countries with available data led to large heterogeneity among countries. In addition, the research design entailed the use of only four variables. This choice was dictated by the aim of focusing on the state vs market forces and not to identify all the possible determinants of TC. As a result, only control variables that were significant in the regression were considered. In fact, even variables on education and urbanization

could be stronger evidence of the results. In particular, the use of consumption of harmful substances could be a better variable used as a proxy for development.

Further research is required in other contexts of transitioning countries, like Cambodia, China, Laos, Mongolia, and Vietnam and Cuba, and with other harmful substances, like alcohol, to support the results of this case study.

In addition, similarly to Stuckler et al. (2009) approach to mass privatization, it would be useful to study if and how the speed of the transition affects development outcomes. This research would be useful to study if the institutional approach, as compared to the shock therapy, helped the state better develop and softened the impact that harmful investments could have had on health. Moreover, studying this relationship as well for countries not in transition, could be useful to study the behaviour in a normal setting. Lastly, further research is needed to identify how the state can improve its government effectiveness, control of corruption and rule of law to provide practical guidelines.

## **10. Conclusions**

The research had the aim of understanding to what extent the market or the state have influenced TC during the transition in EEFSC. This aim has been accomplished by running a regression analysis with fixed effects, which showed that FDI were not significantly correlated to TC, while the state was. These results lead to the conclusion that it was not the market, through FDI, rather the state, through its ability to have control and effectiveness on its policies, that may have shaped TC. These results are valuable within the state versus market debate, meant with a new development conceptualization, to support the state side of the debate in driving TC and, hence, health and development. These results are helpful to drive policy implications on the importance of the role of the state in determining development and the role of the state during transition. Although further research is needed in different case studies and risk factors to support these results, this research represents a good starting point to create knowledge on how to improve health and development in transitioning countries.

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