

**Article (Explore Econ Runner-Up)**

# What is the potential impact of a uniform VAT rate in Spain, if implemented in a revenue neutral way?

Guillaume Marder<sup>1</sup>

<sup>1</sup> Student (Dual Degree BA European Social and Political Studies, 2019-2023), European and International Social and Political Studies, UCL, UK; guillaume.marder.19@ucl.ac.uk

Submission Date: 25<sup>th</sup> April 2022; Acceptance Date: 8<sup>th</sup> June 2022; Publication Date: 25<sup>th</sup> August 2022

## How to cite

Marder, G. (2022). What is the Potential Impact of a Uniform VAT Rate in Spain, if Implemented in a Revenue Neutral Way?. *UCL Journal of Economics*, vol. 1 no. 1, pp. 9-15. DOI: 10.14324/111.444.2755-0877.1401

## Peer review

This article has been peer-reviewed through the journal's standard double-blind peer review, where both the reviewers and authors are anonymised during review

## Copyright

2022, Guillaume Marder. This is an open-access article distributed under the terms of the Creative Commons Attribution Licence (CC BY) 4.0 <https://creativecommons.org/licenses/by/4.0/>, which permits unrestricted use, distribution and reproduction in any medium, provided the original author and source are credited • DOI: 10.14324/111.444.2755-0877.1401

## Open access

*UCL Journal of Economics* is a peer-reviewed open-access journal

## Abstract

This paper analyses a revenue neutral reform of the Spanish tax system. Differentiated VAT rates on all products except alcoholic beverages and tobacco would be eliminated and replaced by a single uniform rate of tax. This could lead to substantial efficiency gains by reducing distortions in consumption and production decisions, as well as administrative and compliance costs. The current system also has the peculiarity of being slightly regressive, meaning that unlike most other similar reforms, this one would also lead to gains in terms of equity.

**Keywords:** Tax Policy; Spanish Economy; Efficiency Gains

## 1. Introduction

This paper analyses a simulated revenue neutral reform of VAT in Spain. The country currently has differentiated rates of VAT. Switching to a system with a single uniform rate might be particularly beneficial in terms of efficiency. However, differentiated rates are often used for equity objectives. This paper shows that the current Spanish tax system is slightly regressive and thus analyses why such a reform could have benefits both in terms of efficiency and equity.

## 2. The Reform: Description and Background

Spain currently has a standard VAT rate of 21%, a reduced rate of 10%, a super reduced rate of 4% and a number of VAT exempt products (European Commission, 2021). This reform would eliminate differentiated rates and replace them by a single uniform rate for all products except alcoholic beverages and tobacco. It would be carried out in this way as differentiated rates on this product category are usually implemented not only to raise revenue but also to reduce externalities and for public health reasons, meaning there is a rationale for not changing them. Currently, Spain is one of the EU countries with the largest share of goods not subject to the standard VAT rate (Figure 1: Bach et al., 2021), meaning there is potentially great scope to reduce the standard rate.

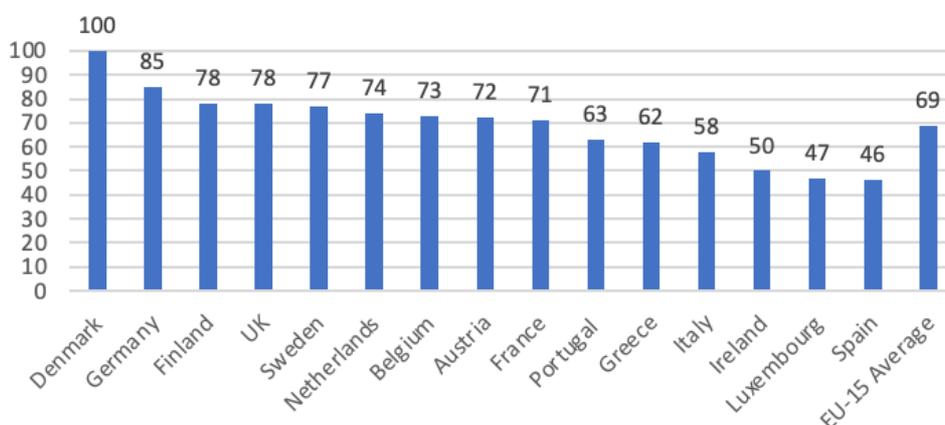


Figure 1: Share of the Standard VAT Rate as a percentage of the whole VAT Taxable Base (Year 2000)  
Source: Bach et al (2021)

A tax system's efficiency is typically measured by c-efficiency which decomposes efficiency into two measures: the policy and compliance gaps; it could be improved upon as those measures are not zero (Table 1: Keen, 2013). The policy gap is zero if a uniform rate of VAT is applied to all final consumption and the compliance gap measures how much tax evasion there is.

Country	C-efficiency	Compliance Gap	Policy Gap	Breakdown of the Policy Gap	
				Rate Differentiation	Exemptions
Austria	59	14	31	18	17
Belgium	52	11	42	22	25
Denmark	64	4	33	0	33
Finland	61	5	36	12	27
France	51	7	45	26	26
Germany	57	10	37	12	28
Greece	47	30	33	30	4
Ireland	66	2	33	24	12
Italy	43	22	45	26	26
Luxembourg	87	1	12	30	-26
Netherlands	60	3	38	24	19
Portugal	53	4	45	25	27
Spain	57	2	29	33	-6
Sweden	56	3	42	19	29
United Kingdom	48	17	42	21	27

Table 1: C-Efficiency in 15 European Countries in 2006

Source: Keen (2013)

### 3. Literature Review

#### 3.1. Advantages of the reform

Such a reform would improve the efficiency of the Spanish tax system. According to optimal tax theory, having a uniform rate is beneficial as Mankiw et al. (2009) argue that only final goods being taxed, and typically at a uniform rate, is one of the main lessons of this literature. This outcome is efficient as it does not distort production decisions by avoiding taxation of intermediate goods and aims at reducing distortions in consumer behaviour when choosing between products.

Rate differentiation is achieved in two ways: reduced rates (potentially even rates of 0%) or having tax exempt products, Spain uses both methods. Exemption is seen as more problematic in the optimal taxation literature: it leads to higher administration and compliance costs and impacts economic efficiency by breaking chains of VAT (Abramovsky et. al, 2017).

A uniform rate of VAT also means that taxpayers need to supply less information to the tax authority which reduces compliance costs. Bach et al. (2021) find a positive correlation between having a higher number of differentiated rates and higher compliance costs.

Less information being supplied by taxpayers also means less scope for tax evasion. According to Keen and Smith (2006), this removes the incentive for taxpayers to misclassify their commodities so that they are taxed at a lower VAT rate than what they should be and reduces the problem of traders abusively claiming refund entitlements when they use inputs taxed at a higher VAT rate than the final products they sell.

A uniform rate also means avoiding litigation and lobbying costs for the tax treatment of goods. With several rates, producers might try to have their product be considered as fitting in the lower tax category (Abramovsky et. al, 2017).

Finally, rate differentiation is often said to be done to reduce inequalities. Often, food is taxed at a reduced rate because its budget share is higher for poorer households. Boeters et al. (2010) argue that sometimes the aim of such policies is not to reduce inequalities. They study the German tax system and emphasise that rate differentiation acts in part as “industry-specific subsidies”, obtained through lobbying efforts. This means that when they test a potential removal of rate differentiation, they find a very small negative impact on equity. However, Abramovsky et. al (2017) highlight that such effects on inequality cannot be assessed generally but are specific to each tax system and therefore remain a largely empirical question.

### 3.2. Drawbacks of the reform

There is an efficiency argument for having differentiated rates. According to Ramsey (1927), in a model with a single individual and where revenues can only be raised through commodity taxes then there should be multiple rates so that the compensated demand for each product is reduced by the same amount - this can be implemented by using differences in elasticities of demand (Baumol & Bradford, 1970). Diamond (1975) highlights that when such a Ramsey rule is applied, there is a trade-off between efficiency and equity; the goods with the smallest elasticities, which should be taxed the most, tend to be necessities such as food that make up a larger budget share for poorer households. Similarly, Corlett and Hague (1953) and Kleven (2004) advocate differential taxation of goods, but based on whether a good is complementary with leisure or not.

Differentiated rates also allow for lower taxation of goods most prone to tax evasion which reduces the incentive to evade the tax (Abramovsky et. al, 2017).

Finally, equity objectives are often the argument put forward for having differentiated rates. Rate differentiation is often designed to reduce the tax burden on poorer households by having reduced rates on necessities like food. Hossain (1995) studies a reform in Bangladesh that substitutes having multiple differentiated rates for a single uniform rate of taxation and finds that such a reform decreases overall welfare as it raises inequality. However, this result is sensitive to how averse to inequality society is modelled to be.

## 4. Data Analysis

The proposed reform is tested using 2020 data on consumption expenditures from the Spanish national statistics agency (INE, 2020); individuals are divided into quintiles according to the amount of their consumption. Revenue currently raised is calculated per quintile and then summed across households; a new uniform rate that raises the same amount of revenue is then computed. This allows us to know what share of total spending is devoted to VAT on average per household in each quintile. Moving to a uniform rate of tax would typically be assumed to be regressive. But here, as shown in the graph below, the initial system is slightly regressive while the proposed one has a completely flat distribution.

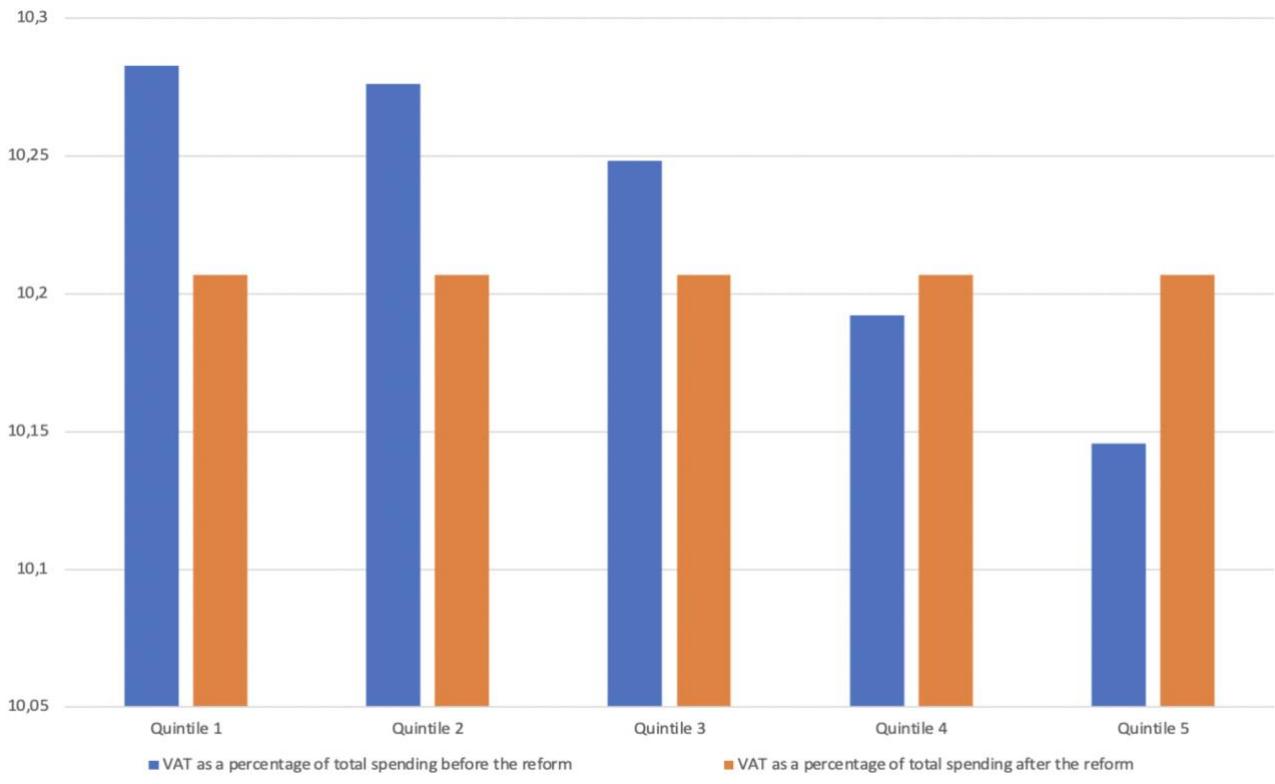


Figure 2: Average Share of VAT in Total Spending per Quintile Before and After the Reform  
 Source: INE (2020) Based on Expenditure Quintiles

Using expenditure quintiles for those calculations is better than using income quintiles as it captures the fact that individuals tend, to a certain extent, to smooth their consumption over their lifetime so that incomes vary more than consumption (Stiglitz & Rosengard, 2015). Consumption quintiles are then a better representation of an individual's place in a society's wealth distribution. The system is seen as only very slightly regressive, probably in part because of this smoothing effect of consumption data instead of income data. Poterba (1989), for example, observes that taxes on motor fuels are far less regressive when taking into account consumption data instead of income data because of this smoothing effect.

The initial regressivity of the Spanish tax system may seem surprising as rate differentiation is often carried out for equity objectives. Such regressivity can be explained because some necessities like food are subject to a reduced rate, while other goods such as education are tax exempt, even though they can be considered to be luxuries as they are a larger budget share for richer households as shown in the two graphs below.

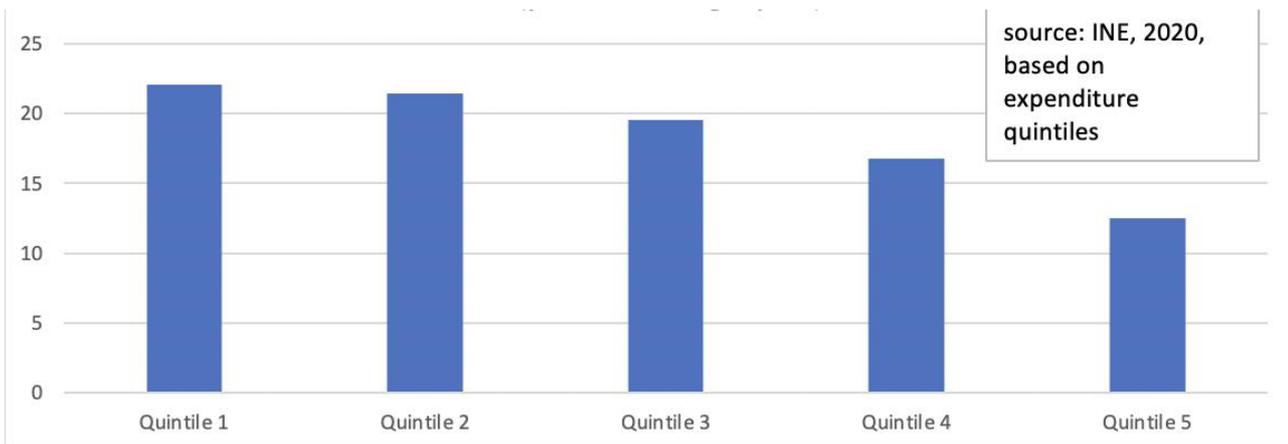


Figure 3: Budget Shares of Food and Non-Alcoholic Beverages per Quintile (Product Category 01)  
Source: INE (2020) Based on Expenditure Quintiles

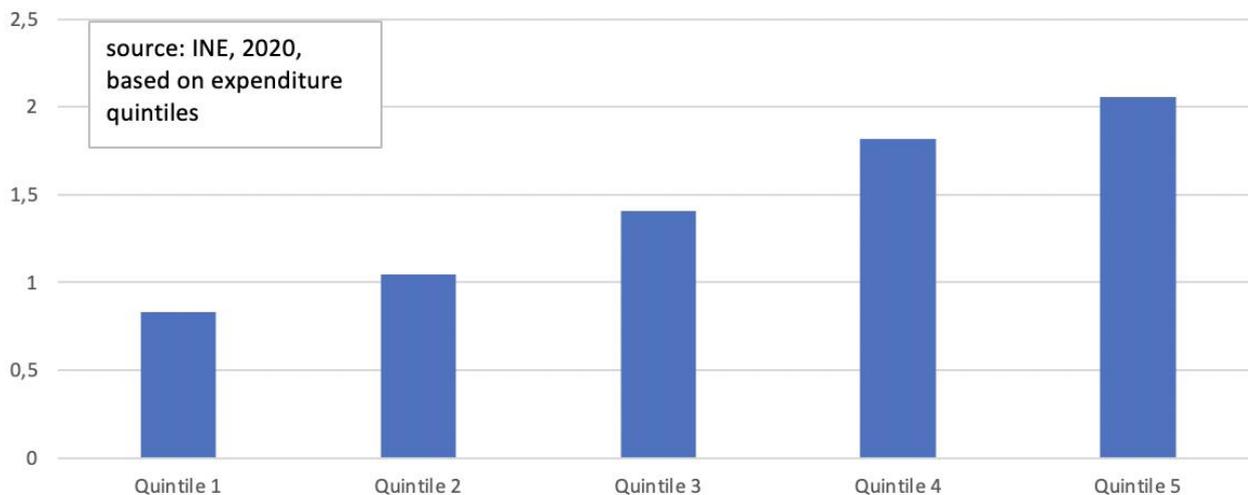


Figure 4: Budget Shares of Education per Quintile (Product Category 10)  
Source: INE (2020) Based on Expenditure Quintiles

This analysis is carried out in a revenue neutral way: the initial and the proposed tax systems raise the same amount of revenue meaning that the macroeconomic effects on the government's deficit do not have to be considered. This is done assuming behavioural responses to the tax away. To take them into account would require having data on elasticities of demand for each quintile, which is not available. In reality, consumption patterns are affected by changes in the structure of taxation (Andrikopoulos et al., 1993). Although, it can be assumed that despite changes in behaviour, sufficient revenue should be raised as a result of the lower administrative and compliance costs, and the reduced tax evasion with such a reform. This is reinforced by Hossain (1995) who argues that as total expenditure should not change with such a reform, the tax in theory still manages to raise the required revenue, making such an assumption valid.

## 5. Conclusion

Eliminating the many different rates of VAT in the Spanish tax system and substituting them with a single uniform rate would potentially have substantial benefits. In terms of efficiency, less information would have to be supplied by taxpayers which would reduce the scope for evasion. Litigation and lobbying costs for the VAT classification of products would also be eliminated. A simpler system also means a reduction in administrative costs. Such efficiency gains can often only be achieved at the cost of higher inequalities, but since, in this case, the current system is slightly regressive, making the tax burden flat could also be beneficial in terms of equity.

## References

- Abramovsky, L. et. al, (2017). Redistribution, efficiency and the design of VAT: a review of the theory and literature, IFS Briefing Note **BN212**
- Andrikopoulos, A. A., Brox, J. A., & Georgakopoulos, T. A. (1993). A short-run assessment of the effects of VAT on consumption patterns: the Greek experience. *Applied Economics*, **25**, 617-626.
- Bach et al., (2021). "Value added tax – VAT gap, reduced VAT rates and their impact on compliance costs for businesses and on consumers", European Parliamentary Research Service
- Baumol, W. J., & Bradford, D. F. (1970). Optimal departures from marginal cost pricing. *The American Economic Review*, **60**, 265-283.
- Boeters, S., Böhringer, C., Büttner, T., & Kraus, M. (2010). Economic effects of VAT reforms in Germany. *Applied Economics*, **42**, 2165-2182.
- Corlett, W. J., & Hague, D. C. (1953). Complementarity and the excess burden of taxation. *The Review of Economic Studies*, **21**, 21-30.
- Diamond, P. A. (1975). A many-person Ramsey tax rule. *Journal of Public Economics*, **4**, 335-342.
- European Commission. (2021). VAT rates applied in the Member States of the European Union
- Hossain, S. M. (1995). The Equity Impact of the Value-Added Tax in Bangladesh. *Staff Papers*, **42**, 411-430.
- Instituto Nacional de Estadística INE. (2020). Average expenditure by household, average expenditure by person and expenditure distribution (vertical and horizontal percentages) by expenditure group and expenditure quintile. URL: <https://www.ine.es/jaxiT3/Tabla.htm?t=24900&L=1> [consulted 21/03/22]
- Keen, M. (2013). The Anatomy of the VAT. *National Tax Journal*, **66**, 423-446.
- Keen, M., & Smith, S. (2006). VAT fraud and evasion: What do we know and what can be done?. *National Tax Journal*, **59**, 861-887.
- Kleven, H. J. (2004). Optimum taxation and the allocation of time. *Journal of Public Economics*, **88**, 545-557.
- Mankiw, N. G., Weinzierl, M., & Yagan, D. (2009). Optimal taxation in theory and practice. *Journal of Economic Perspectives*, **23**, 147-74.
- Poterba, J. M. (1989). Lifetime Incidence and the Distributional Burden of Excise Taxes. *The American Economic Review*, **79**, 325–330.
- Ramsey, F. P. (1927). A Contribution to the Theory of Taxation. *The economic journal*, **37**, 47-61.
- Stiglitz, J. E., & Rosengard, J. K. (2015) Introduction to taxation. In Stiglitz, J. E., & Rosengard, J. K. *Economics of the public sector* (4th ed.). W. W. Norton & Company, pp 538-570.