

## THE ROLE OF COMPUTER TECHNOLOGIES IN TAX ADMINISTRATION

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### ***Abstract***

Tax management is a crucial part in the tax administration, and dealing with it in proper ways will help avoid a lot of useless formalities that are as obstacles for easier client-institution interaction. The major developments in the IT field have attracted people who are concerned with this particular issue, and together with software experts they continuously strive to find better ways to manage tax-related tasks. This paper will try to illuminate the role that new technologies have in administering taxes, by giving an overview of where the issue stands and where it is headed. We will provide examples in order to clarify these new developments, and hopefully, offer suggestions for the future.

**Keywords:** *Tax, Computer technology, administration.*

### **Introduction**

Consistently, the tax executives have been concerned about evaluating better approaches for enhancing institutional execution of tax tasks by expanding the viability of duty control and giving citizens the benefits that may enable them to better consent to their expense commitments. With continuous change of result, an on a very basic level, essential issue are giving an impression of being the most troublesome, and things that we consider simple can be overlooked and generate problems. For this reason assessment and administrative organizations strive to embrace and put into activity indispensable models of tax management that will lead their

regulatory procedures. The seriousness of this mission makes these organizations in a constant search for better adaptation in a forever evolving conditions that require the improvement of these models which are, basically, deciding the achievement factor for reaching the main goal in providing better tax management tools. Computer technologies provide the tools to deal with the concerns relating to tax administration and execution.

### **The Foundation**

Every issue that needs to be dealt with has a given foundation upon which it stands on. Tax administration is not an exception to this rule. There is a constant request to find proper tools by which taxation tasks can be administered and provide the requested results. As presented in the paper "Information Technology in Support of the Tax Administration Functions and Taxpayer Assistance", there is a complex scheme of operational processes that need to be executed in order to provide good results and secure tax management tasks, which in return will make way for a more consistent analysis for reporting to taxpayers. According to the authors of the mentioned paper, this is the operational structure for assisting tax tasks.

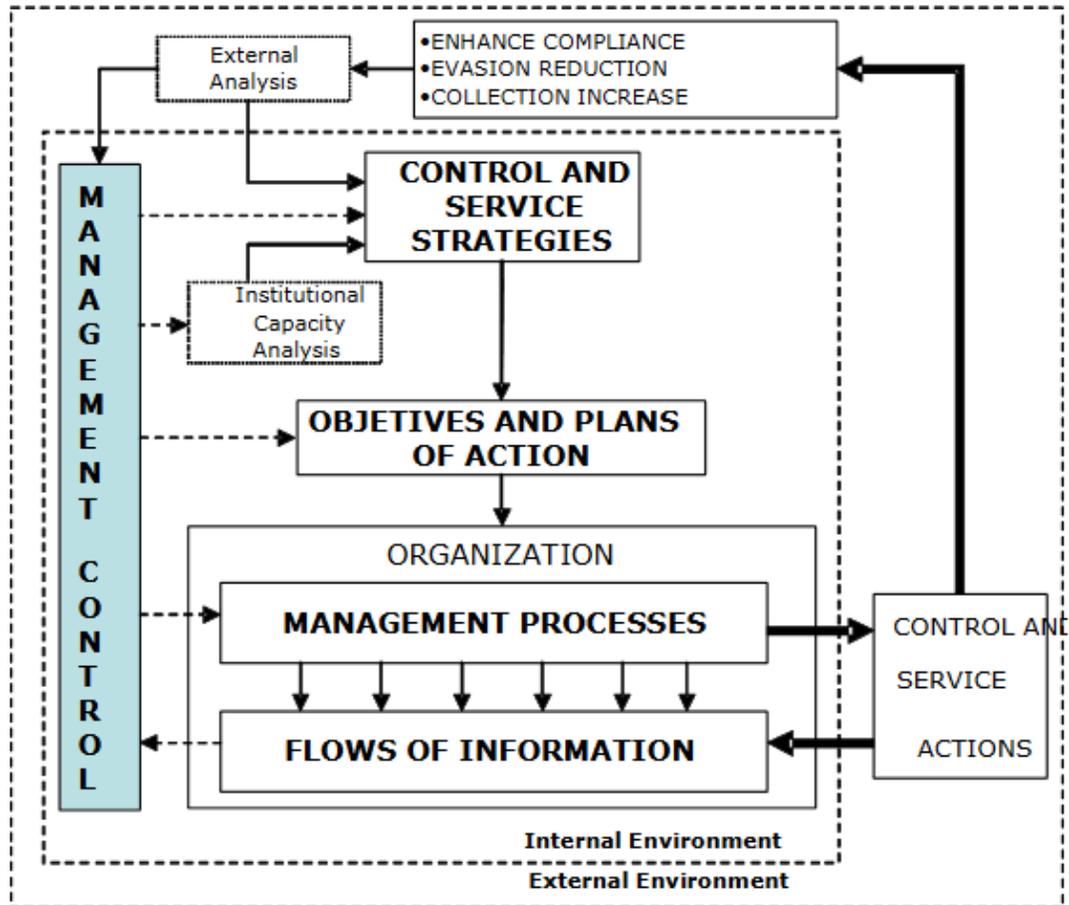


Fig. 1 Management Control (Gutierrez, 2002)

The developments of the advanced economy have rendered many set up methods for gathering deals or pay taxes through software or to manage those that are out of date. In any case, while innovation is at the foundation of these developments—governments pay for the arrangement of administrators who know how to deal with these specifics, with the main goal of achieving that which is planned. (Gutierrez, 2002)

All these frameworks are scattered throughout every area where taxes are present, from a simple store, all the way up at the state level. Although for someone tax-related issues can be a bit obscure and complex to understand and extract any meaning out of them, this is particularly where IT tools offer a helping hand in clarifying the mess.

There is a constant worry that some computerized organizations are misusing the portability and impalpable nature of advanced stages of tax-related tasks provided by IT software, meaning that

they misuse them, or do not record everything, thus paving the way for tax evasion. However, the speed and accuracy of the tools cannot be underestimated.

Associations and governments alike should exploit new innovation to lower the computerized expense (the hole between the existing assessment approach and the quickly developing advancement in the world economy). Increasingly more cunning new businesses are creating advanced tools intended to encourage nations and organizations defeat the ever-expanding multifaceted nature of tax-related issues. (EY Global, 2018)

One issue that must be tended to: the nature of information. Since each exchange in the advanced economy is recorded by PCs, liabilities ought to be simple.

As Ryan Tweedie puts it: "We have to rationalize the overall enterprise data dictionary across all kinds of human resources, finance, procurement, tax and audit systems.". This a crucial point in today's IT developments, the fact that almost everything is in some influenced by it or through it, including taxations.

The fast progressions and developments in plans of action, both in the computerized and the "digitized" economy, are testing the conventional standards of universal tax assessment as never before. Blockchain Technology, Fintech, Cloud Computing, Artificial Intelligence, Robotics, the Internet of Things are changing customary methods of activities, forms and worldwide chains of economic development, and pushing the current limits of tax assessment. (WU Institute, 2017) However, at the same time, these advancements change the manner in which that tax administrators work and communicate with citizens, which for those that have worked in a more conventional environment, means they have to be trained to use new technologies, and in this way making them more efficient.

### **Data Breach**

Although IT technologies seem to facilitate tax administration, they also represent a huge risk if not done correctly. How so? We are constantly bombarded with information that a certain company has been a victim of Cybercrime, or even more seriously, the company itself has sold our data to a third party, such as the Facebook and Cambridge Analytica Scandal. These are serious issues that tax software developers need to address immediately. It is not the same when we expose a picture of somebody, compared to exposing sensitive data such as those relating to taxes. In other words, IT ethics is very important when dealing with taxation tasks.

### **Visualizing Taxes**

Nowadays, almost everyone is a visual person, meaning we like to view things rather than just talk about them. This leads to Data Visualization, which is probably the most used technology in dealing with data, including taxes. A person who works in tax administration will be more effective in his work if he or she will get faster to results. To achieve this there is a need for faster ways or tools to analyse data, preferably in real time. Real-time data visualization is the answer to all this. Software tools such as PowerBI, KNIME, RapidMiner are invaluable tools for this purpose. This is highly important because it helps those who pay, in having a detailed view on what they pay; and those who administer taxation issues, in providing more accurate consumer support.



Fig. 2 Tax Data Visualization

(data from <http://radar.oreilly.com/2013/01/us-tax-rates-visualization.html>)

### Mobilizing taxes

Mobile technologies, which are today's trend in software development, also provide exceptional tools in tax administration. Almost any bank or government institution has a mobile application through which they deal with the taxation tasks. In our lifetime, we can easily say that everyone owns a smartphone, which in return offers the gateway through which clients and tax institutions communicate between each other. If you install an app for this particular purpose, you have immediate access to your tax payments and other related things concerning tax administration. These tools are especially helpful when dealing with deadlines; if in the past we had to engage in postal services to support these tasks, now we can have a real-time overview of where we stand. Websites such as <https://etax-fl.ujp.gov.mk/> are gateways that are extremely helpful in tax-related issues because in the majority of cases they eliminate a lot of paperwork, which as a result will make for fewer expenses and faster access.

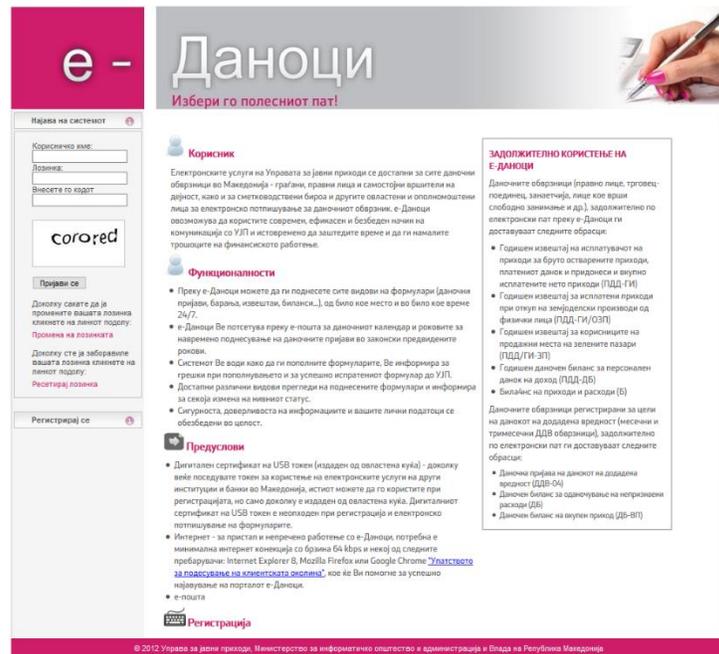


Fig. 3 Macedonian state e-tax website

As we mentioned before, security is a crucial part in tax administration, which can be seen from the picture where for viewing our account data we must go through some verification steps that will give us access.

Another important thing that needs to be mentioned has to do with the nature of the client. Tax administration executes tasks that are related to a single person or a company that needs to pay its obligations. IT tools need to provide different ways of management for both sides because the approach to tax payment and administration has different specifics.

Another issue is to differentiate between taxes that are paid when buying something compared to those each individual owes to his or her country. This leads us to the extreme importance of tax payment and its effect upon economic stability.

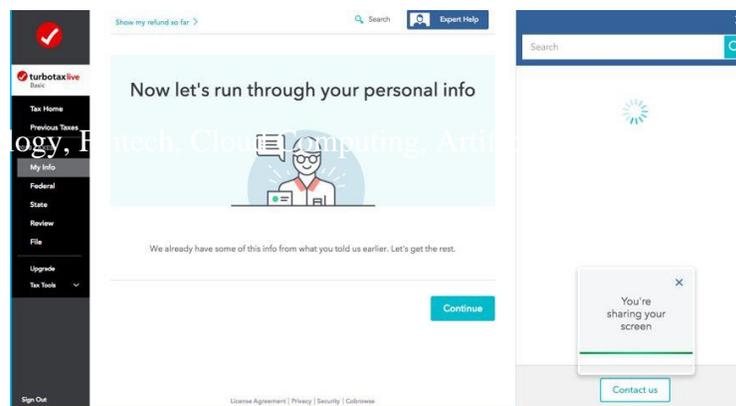
## The tools

Until now we have written about the overall importance of administration of tax tasks. Now it is time to talk a bit regarding some of the tools that we can use to manage our taxes. According to the website [thebalance.com](http://thebalance.com), these are the best tools for this purpose.

- Best Overall: TurboTax.
- Runner-Up, Best Overall: H&R Block.
- Best Bargain: TaxAct Premium. TaxAct. ...
- Best Simple Data Entry Option: TaxSlayer.
- Best for Savvy **Tax** Filers: Liberty **Tax**.
- Best Free **Software**: Credit Karma.
- Best Wizard: Jackson Hewitt Premium. ([www.thebalance.com](http://www.thebalance.com))

This does not mean that these are the only tools that we can use for the purpose, anyway it a good starting point in this direction. In use those that are free, or using the trial versions for the paid ones in order to have a general overview of how these things work.

We should emphasize again, we must differentiate between personal tax administration and state tax administration. Although state institutions can use some of these tools, still, we should have in mind that they have their own software that operates on their own servers, because their tax administration has to do with more sensitive matters knowing that they deal with totally different scope of tasks for which they need to have specific statistical data, which in return requires a more serious approach.



Considerations	TaxAct	TurboTax	H&R Block
<b>Cost Range</b>	\$0 to \$49.95 for federal returns; \$19.95 to \$36.95 for state returns	\$0 to \$89.99 for federal returns; \$39.99 for state returns	\$0 to \$79.99 for federal returns; \$36.99 for state returns
<b>Best Features</b>	Clean, easy to navigate design; mobile app W-2 capture; import federal tax returns filed with other tax software PDF form; Price Lock and Accuracy Guarantees; Protection Plus audit assistance	Integrates with ItsDeductible; import tax returns filed with other software in PDF form; professional tax prep assistance with TurboTax Live; simplified, free expense tracking for self-employed filers	Mobile app W-2 capture; import tax returns filed with other software in PDF form; five percent refund bonus when you load some or all of your refund to an Amazon gift card; Tax Identity Care fraud protection
<b>Download/Mobile App Available?</b>	Yes	Yes	Yes
<b>Customer Support</b>	Phone and e-mail for online and download users; live chat help available with the TaxAct Express mobile app	Chat, phone and through the online TurboTax community, fees apply to speak to a live tax expert	Phone, Twitter and in-person at more than 11,000 H&R Block locations

Table 1. Comparison of Tax Tools

(data from <https://www.thebalance.com/best-tax-software-programs-4154205>)

## Conclusion

In general, in this paper, we have tried to provide examples and an overview on how IT tools can provide us with exceptional methods to deal with taxation tasks in all levels, both personal or state scale. We have emphasized the issues dealing with mobile software developments, which represent the mainstream field of IT management tools in general, and tax-related tasks in specific. We can conclude that IT software is an extremely important aspect in tax administration, especially when dealing with time-pressure tasks, that require fast and accurate reporting.

We can only imagine how things will develop in the future with the advance of AI, and AR or VR applications which are paving the way for future developments with the main goal of building a better management environment. But in no way, we can ignore the risk in using these technologies, because although they are exceptionally facilitating, they can also be a mining field if done wrong, or we don't take security more seriously. This will require IT ethics evaluation and security software advancements.

### References and Bibliography

1. Gutierrez, N.; *Information Technology in Support of the Tax Administration Functions and Taxpayer Assistance*, Third Regional Training Workshop on Taxation, Brasilia, 2002
2. <http://radar.oreilly.com/2013/01/us-tax-rates-visualization.html>
3. <https://etax-fl.ujp.gov.mk/>
4. [https://www.ey.com/en\\_gl/trust/why-technology-is-both-friend-and-foe-to-digital-tax](https://www.ey.com/en_gl/trust/why-technology-is-both-friend-and-foe-to-digital-tax)
5. <https://www.thebalance.com/best-tax-software-programs-4154205>
6. <https://www.wu.ac.at/taxlaw/institute/gtpc/current-projects/tax-and-technology/>
7. Jenkins, G.; *Information Technology and Innovation in Tax Administration*, Harvard University, 1996