

DETERMINANTS OF TAXPAYER SATISFACTION WITH E-TAX FILING SERVICES: NEW EVIDENCE FROM ARTIFICIAL NEURAL NETWORKS APPROACH

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Appendix 1. List of observed variables

| No | Code | Description | Sources |
|-----------------------------|------|--|--|
| <i>Effectiveness</i> | | | |
| 1 | EF1 | Taxpayers can reduce the time required for tax submission by utilizing electronic tax payment systems. | Ha Nam Khanh Giao and Le Minh Hieu (2017) |
| 2 | EF3 | Taxpayers can save on various types of fees by using electronic tax payment systems. | |
| 3 | EF3 | Taxpayers can reduce paperwork by using electronic tax payment systems. | |
| <i>Accessibility</i> | | | |
| 1 | AC1 | axpayers can access the General Department of Taxation's electronic portal to immediately use the e-tax payment service. | Chen (2010) |
| 2 | AC2 | Taxpayers conducting e-tax payments through the General Department of Taxation's electronic portal do not experience network congestion. | |
| 3 | AC3 | Taxpayers always receive transaction confirmation promptly. | |
| <i>Appearance</i> | | | |
| 1 | AP1 | Taxpayers can quickly perform actions on the website to make e-tax payments. | Kim and Stoel (2004) |
| 2 | AP2 | The website provides detailed instructions on installation and how to make e-tax payments. | |
| 3 | AP3 | The e-tax payment website features a user-friendly and easy-to-navigate interface. | |
| 4 | AP4 | The e-tax payment website is consistently upgraded in a timely manner. | |
| <i>Safety</i> | | | |
| 1 | ST1 | The website ensures the confidentiality of taxpayers' tax debt information. | Othman (2012), Ha Nam Khanh Giao and Le Minh Hieu (2017) |
| 2 | ST2 | The security of taxpayers' e-tax payment transaction information. | |
| 3 | ST3 | No misuse or sharing of taxpayers' data for purposes not authorized by the government. | |
| <i>Feedback</i> | | | |
| 1 | FB1 | Taxpayers always receive confirmation information during the e-tax payment transaction process. | Chen (2010), Othman (2012) |
| 2 | FB2 | Taxpayers always receive a confirmation notice from the commercial bank regarding the results of the e-tax payment transaction. | |
| <i>Interactivity</i> | | | |
| 1 | IT1 | The Tax Sub-Department provides a contact phone number for taxpayers encountering issues while making e-tax payments. | Chen, 2010 |
| 2 | IT2 | Tax Sub-Department staff adhere to the prescribed working hours, allowing taxpayers to contact them when needed. | |

| No | Code | Description | Sources |
|---------------------|------|---|---|
| 3 | IT3 | The General Department of Taxation's website has a section dedicated to assisting taxpayers with the e-tax payment service. | The author makes proposals through interviews with taxpayers. |
| Satisfaction | | | |
| 1 | SA1 | In summary, do you feel satisfied with the use of the e-tax payment service provided by the General Department of Taxation? | Ha Nam Khanh Giao and Le Minh Hieu (2017) |
| 2 | SA2 | Would you be willing to recommend the e-tax payment service provided by the General Department of Taxation to others? | |
| 3 | SA3 | Would you continue to use the e-tax payment service? | |

Appendix 2. Descriptive Statistics of Respondents in the research

| | | Amount | N (%) |
|-----------------------------|---|--------|-------|
| Type of organization | Limited company | 8 | 3.9% |
| | Incorporation | 102 | 49.8% |
| | Single-member limited liability company | 75 | 36.6% |
| | Multi-member limited liability company | 20 | 9.8% |
| Total | | 205 | 100% |
| Business registered capital | 50 - <100 bil VND | 91 | 44.4% |
| | 100-<200 bil VND | 48 | 23.4% |
| | 200 -<500 bil VND | 44 | 21.5% |
| | 500 bil VND | 22 | 10.7% |
| Total | | 205 | 100% |

Appendix 3. Item-Total Statistics

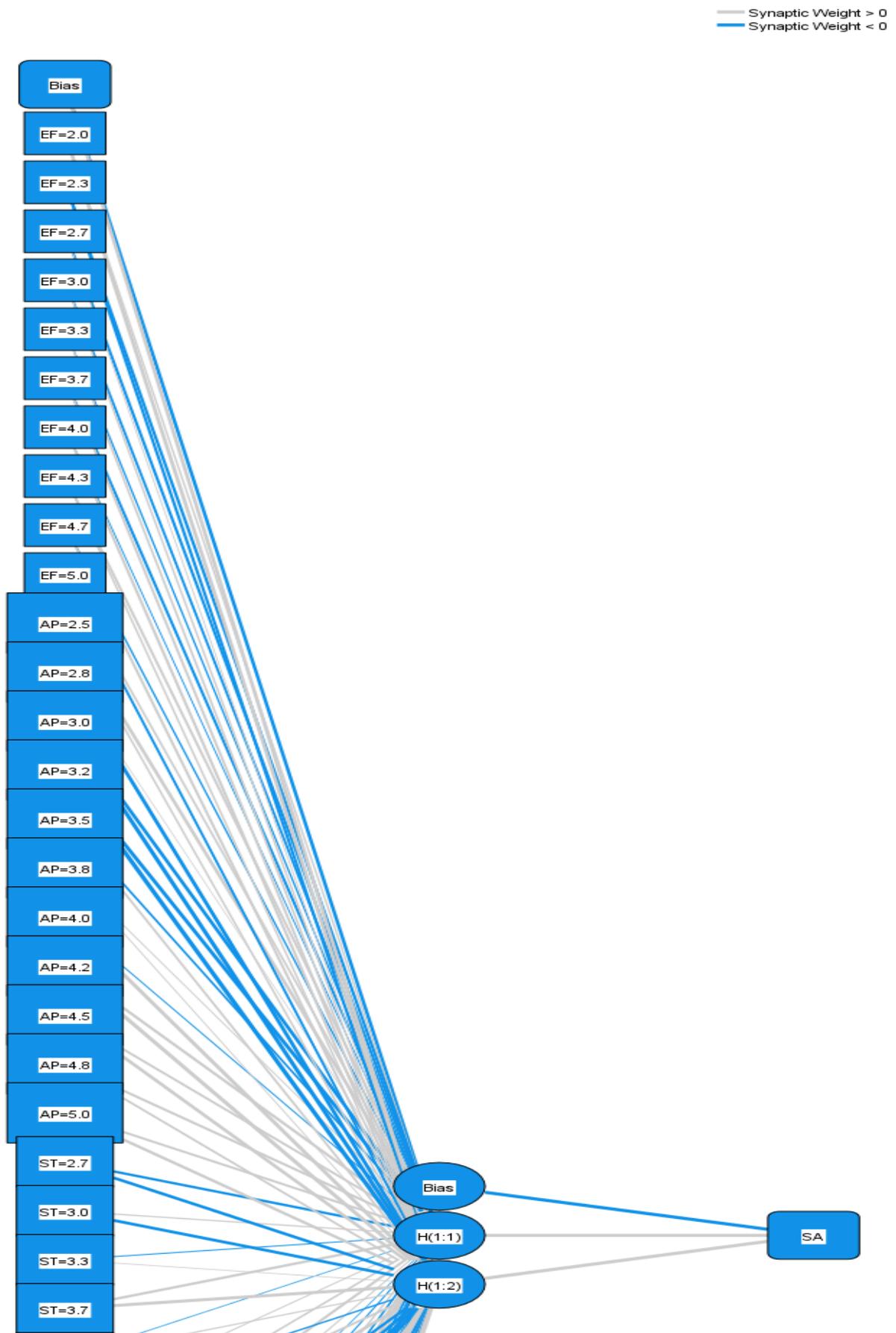
| Code | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
|---|----------------------------|--------------------------------|----------------------------------|----------------------------------|
| Effectiveness component: Cronbach's Alpha = 0.831 | | | | |
| EF1 | 7.14 | 2.397 | 0.700 | 0.756 |
| EF2 | 6.98 | 2.372 | 0.686 | 0.769 |
| EF3 | 6.93 | 2.329 | 0.682 | 0.773 |
| Accessibility component: Cronbach's Alpha = 0.789 | | | | |
| AC1 | 7.94 | 1.668 | 0.596 | 0.750 |
| AC2 | 8.40 | 1.358 | 0.632 | 0.717 |
| AC3 | 8.37 | 1.460 | 0.671 | 0.668 |
| Appearance component: Cronbach's Alpha = 0.861 | | | | |
| AP1 | 12.19 | 3.508 | 0.836 | 0.770 |
| AP2 | 11.76 | 3.359 | 0.676 | 0.847 |
| AP3 | 11.78 | 3.741 | 0.726 | 0.816 |

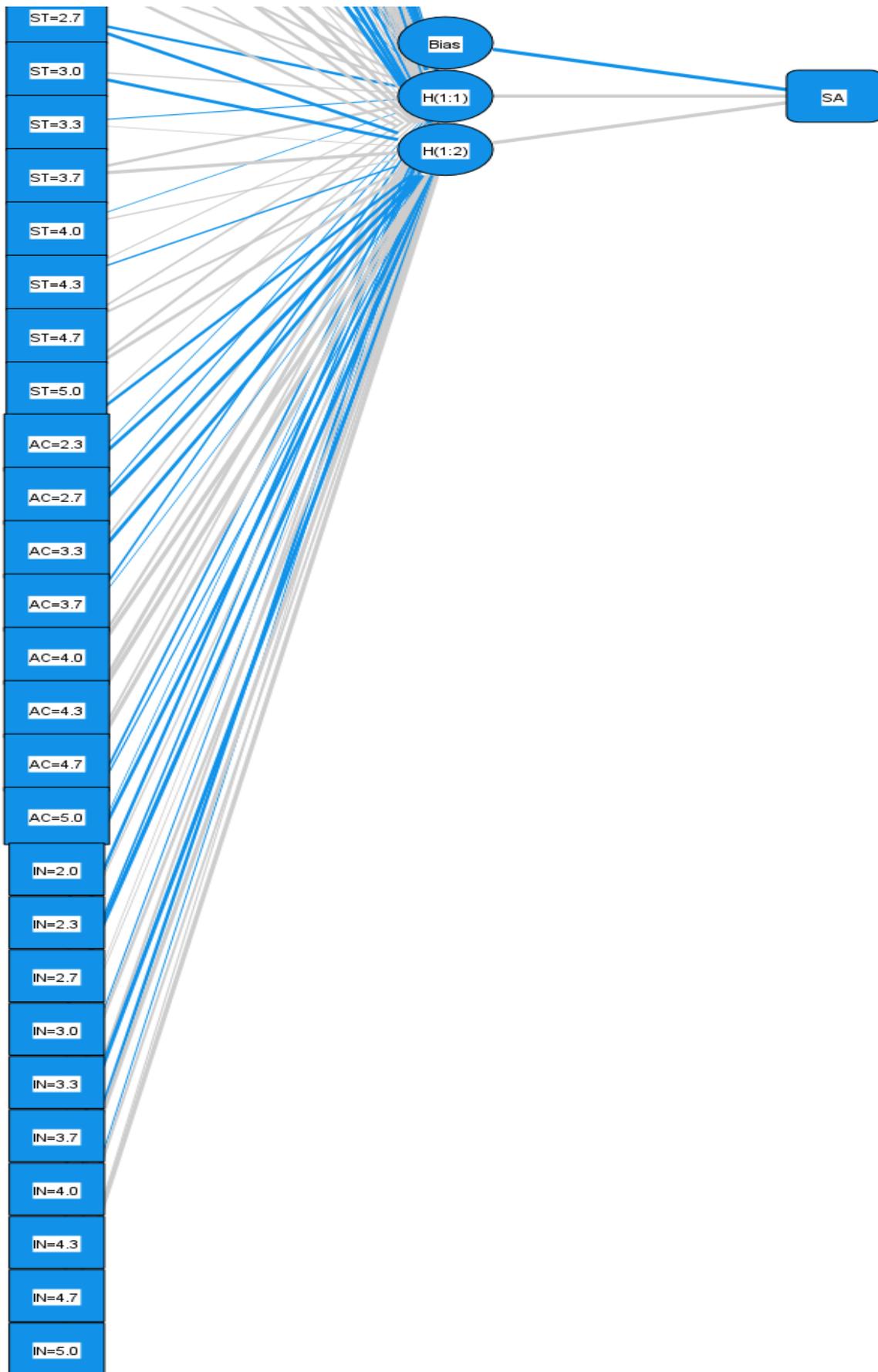
| Code | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
|---|----------------------------|--------------------------------|----------------------------------|----------------------------------|
| AP4 | 11.83 | 4.181 | 0.628 | 0.855 |
| Safety component: Cronbach's Alpha = 0.721 | | | | |
| ST1 | 8.42 | 1.657 | 0.494 | 0.699 |
| ST2 | 8.11 | 1.263 | 0.546 | 0.628 |
| ST3 | 8.18 | 1.109 | 0.615 | 0.539 |
| Feedback component: Cronbach's Alpha = 0.757 | | | | |
| FB1 | 3.07 | 0.682 | 0.610 | . |
| FB2 | 3.60 | 0.762 | 0.610 | . |
| Interactivity component: Cronbach's Alpha = 0.818 | | | | |
| IN1 | 7.87 | 2.415 | 0.743 | 0.673 |
| IN2 | 7.66 | 3.079 | 0.625 | 0.803 |
| IN3 | 7.84 | 2.250 | 0.675 | 0.759 |
| Satisfaction component: Cronbach's Alpha = 0.830 | | | | |
| SA1 | 8.63 | 1.803 | 0.685 | 0.772 |
| SA2 | 8.44 | 1.474 | 0.731 | 0.723 |
| SA3 | 8.37 | 1.725 | 0.659 | 0.793 |

Appendix 4. Correlation matrix results

| | | Sum of Squares | df | Mean Square | F | Sig. |
|----|----------------|----------------|-----|-------------|--------|-------|
| EF | Between Groups | 6.600 | 6 | 1.100 | 2.066 | 0.059 |
| | Within Groups | 105.419 | 198 | .532 | | |
| | Total | 112.020 | 204 | | | |
| AP | Between Groups | 33.614 | 6 | 5.602 | 23.859 | 0.000 |
| | Within Groups | 46.493 | 198 | 0.235 | | |
| | Total | 80.107 | 204 | | | |
| ST | Between Groups | 10.794 | 6 | 1.799 | 7.291 | 0.000 |
| | Within Groups | 48.858 | 198 | 0.247 | | |
| | Total | 59.652 | 204 | | | |
| AC | Between Groups | 36.348 | 6 | 6.058 | 35.421 | 0.000 |
| | Within Groups | 33.863 | 198 | 0.171 | | |
| | Total | 70.210 | 204 | | | |
| IN | Between Groups | 23.649 | 6 | 3.942 | 7.948 | 0.000 |
| | Within Groups | 98.191 | 198 | 0.496 | | |
| | Total | 121.840 | 204 | | | |

Appendix 5. ANN Model





Hidden layer activation function: Sigmoid
 Output layer activation function: Sigmoid