

Item Response Theory Analysis of the Progress in International Reading Literacy Study (PIRLS) 2021 in Kazakhstan

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ARTICLE INFO	ABSTRACT
<p>Article History: Received: 2024 May Accepted: 2024 July</p>	<p>Progress in International Reading Literacy Study (PIRLS) is an international comparative study of reading comprehension that is administered by the International Association for the Evaluation of Educational Achievement (IEA) to measure the reading competency of fourth-grade students in the participating countries. The test is a very comprehensive measure of reading literacy which covers a wide variety of reading subskills and texts. The purpose of the current study is to evaluate the psychometric qualities of PIRLS 2021 using the national data of Kazakhstan. The 2-parameter item response theory was used to evaluate the test. Item difficulty, discrimination, infit, outfit, and the root mean square deviance (RMSD) fit statistics were examined. The multiple-group IRT was used to examine differential item functioning. Findings showed that PIRLS 2021 is a robust measure of reading comprehension and does not exhibit differential item functioning (DIF). However, based on the 2PL discrimination and infit and outfit values, several items are problematic. The implications of this finding are discussed.</p>
<p>KEYWORDS 2PL IRT MGIRT PIRLS Reading literacy RMSD</p>	

1. Introduction

Progress in International Reading Literacy Study (PIRLS) is an international assessment of the reading comprehension of fourth-grade students. Conducted by the International Association for the Evaluation of Educational Achievement (IEA), PIRLS aims to measure trends in reading literacy achievement worldwide. The study provides valuable insights into the reading abilities of students across different countries and allows policymakers and educators to assess the effectiveness of literacy programs and make informed decisions to improve reading instruction (IEA, n.d.).

IEA's PIRLS 2021 is the fifth cycle in the PIRLS assessment. PIRLS provides internationally comparative data on how well children read by assessing students' reading achievement at the fourth grade. Trend results across assessments permit countries to monitor the effectiveness of their educational systems in a global context. PIRLS 2021 introduced a significant advancement in international fourth-grade reading assessment by shifting to digital assessment methods. This transition offers benefits such as enhanced measurement accuracy through more interactive materials and procedures. Moreover, the shift to digital streamlines operational tasks like distributing materials to schools, leading to increased consistency and efficiency (Mullis et al., 2023).

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Cite this paper as: Atmawinata, M. R., Herwina, W., Bulan, S. Wikanengsih, W., Darheni, N. & Tashtemirova, G. (2025). Item Response Theory Analysis of the progress in international reading literacy study (PIRLS) 2021 in Kazakhsta. *International Journal of Language Testing*, 15(1), 122–152.
<https://doi.org/10.22034/IJLT.2024.456241.1343>

The digital assessment system for PIRLS 2021 features a cutting-edge user interface allowing students to navigate texts freely and access item panels. It also includes interactive text features and innovative ePIRLS tasks, building on previous work from 2016 to evaluate reading comprehension in a simulated online environment. Additionally, the digital assessment systems facilitate text and item translation, test delivery, student administration, and data scoring. The PIRLS 2021 framework forms the basis for assessing fourth-grade students' reading achievement globally, taking into account different reading purposes and comprehension processes. PIRLS is widely recognized as the primary standard for evaluating reading comprehension at the elementary level worldwide. PIRLS 2021 shifted to a digital format while still offering the traditional paper-and-pencil option (Mullis & Martin, 2019).

PIRLS 2021 presents passages of varying difficulty levels, with the assessment design allowing results to be reported on a consistent achievement scale. The introduction of ePIRLS computer-based tasks expands the assessment to evaluate students' ability to read, interpret, and evaluate online information within an internet-like environment (Reynolds et al., 2024). The PIRLS framework emphasizes the two main purposes for reading—literary experience and information acquisition and usage—which are prevalent both in and out of school settings for young students (Mullis & Martin, 2019). Additionally, the assessment incorporates four comprehensive comprehension processes for each purpose: extracting explicitly stated information, making simple inferences, interpreting, and synthesizing ideas, and critically evaluating content and textual elements. It's important to recognize that reading purposes and comprehension processes interact with each other and are influenced by students' surroundings and learning contexts (Mullis & Martin, 2015).

In PIRLS 2021, 26 countries and 7 benchmarking entities adopted digital assessment as their primary data collection method, alongside administering paper-based trend texts from PIRLS 2016 to a "bridge" sample. The United States conducted both the digital assessment and the paper bridge assessment, opting to report the scores from the paper bridge. Meanwhile, the remaining 31 countries and 1 benchmarking entity continued to use paper booklets for the full assessment (Reynolds et al., 2024).

The only item quality analysis on PIRLS 2021 has been done by the TIMSS & PIRLS International Study Center in Boston Colleague and published in the PIRLS 2021 technical report (Bristol et al., 2023). The study was conducted to ensure data quality and to detect items with unusual psychometric properties or anomalous data patterns. The study also aimed to address potential translation or technical errors and scoring reliability issues for human-scored items.

In this process, item statistics were computed for each participating country and combined into item almanacs for internal and external review. The findings showed that out of 769 items across digitalPIRLS, paperPIRLS, and the bridge booklets, very few items were inappropriate for international comparisons. Most issues were attributed to translation errors and scoring reliability problems in human-scored items. Several items were deleted or recoded based on the review findings. Notably, a significant number of items were deleted from Albania due to severe differential item functioning (DIF) issues.

Two statistical methods were employed to detect item-by-country interactions: Rasch item difficulties and IRT methods. This analysis helped identify items that performed inconsistently across different countries, suggesting potential flaws for specific countries. The cross-country scoring reliability study showed high scorer reliability, averaging 92.5% across countries, indicating consistent application of scoring guides.

The review included comparisons between the statistical properties of digital and paper versions of items. This comparison ensured that items functioned similarly across formats, maintaining the validity of trend measurements. These findings underline the comprehensive efforts made to ensure the accuracy, reliability, and validity of the PIRLS 2021 data, essential for meaningful international comparisons of student reading literacy.

The research conducted by the TIMSS & PIRLS International Study Center examined the items in a pooled analysis of all the participating countries. In this study, we focus on the data of a single country, namely, Kazakhstan. The purpose of this study is to examine the validity and reliability of digital and ePIRLS 2021 using the national data of Kazakhstan. The 2-parameter item response theory (2PL) model (Birnbaum, 1968) was estimated along with the multiple-group IRT (Bock & Zimowski, 1997) to evaluate the psychometric properties of the PIRLS 2021. be added separately for the Proceedings.

2. Methodology

2.1 Instruments and Participants

Publicly available data were used for this analysis (Fishbein et al., 2024). The Kazakhstan sample consisted of 7023 students (3516 girls and 3507 boys) with a mean age of 10.76 ($SD=.43$). Kazakhstan took the digital version of PIRLS 2021 which also contained the ePIRLS items. Digital PIRLS and ePIRLS 2021 altogether contained 466 items. However, when the items which had not been scaled due to poor psychometric qualities were dropped from the analysis 363 items remained. The test contained 76 polytomous items (68 items with three response categories scored 0,1,2, and 8 items with four response categories scored 0,1,2,3). The rest of the items were dichotomously scored items.

3. Analysis and Results

3.1 Item Parameters and Fit Statistics

PIRLS 2021 data for Kazakhstan was analyzed with the unidimensional 2-parameter item response theory (2PL IRT) model using the *TAM* package (Robitzsch et al., 2022) in R (R Core Team, 2023). The Senate weights were included to follow the PIRLS operational procedures. The analysis converged after 70 iterations. The EAP reliability of the test was .873. Table 1⁴ shows the item parameters for 363 PIRLS 2021 digital and electronic items with the original item labels. The column 'alpha' indicates the IRT discrimination parameter and 'beta' is the location or difficulty parameter. In the case of polytomous items, the 'tau.Cat' columns show the threshold values. The 3-category items have two thresholds and the 4-category items have three thresholds. As Table 1 shows the discrimination values range from .127 to 2.96 with a mean of 1.124. The difficulty parameters range from -2.483 to 2.96 with a mean of -.209. The alpha parameter shows that many items have very low discriminations.

Table 2 shows the infit, outfit, and RMSD item fit values. Infit and outfit statistics are used to detect misfitting items. They are calculated based on the difference between the model-expected probability of a correct response and the actual response provided by the examinee. High values suggest that the data does not fit the model well, and low values suggest that the model might be too closely fitted to the data (Bond et al., 2020). RMSD is the difference between the model-expected item characteristic curve (ICC) and the empirical ICC. In the context of ILSAs where there are many groups, it is the difference between group specific ICC and the common ICC (estimated based on all the groups). Lower RMSD values indicate a better fit of the model to the data. An RMSD of 0 would indicate a perfect fit.

Outfit values ranged from .655 to 1.798 (excluding item 174 which had an outfit of 28.097), infit values ranged from .88 to 1.159, and RMSD values ranged from .008 to .087. The recommended range for infit and outfit values is .50 to 1.50 (Linacre, 2023). Considering that the RMSD is the major fit statistic that is used in large-scale assessments and a cutoff value of <.12 is used by PISA (OECD, 2017) as a measure of invariance, all the items fit the Rasch model.

3.2 Differential Item Functioning

Differential item functioning (DIF) across genders was evaluated using multiple-group item response theory (MGIRT; Bock & Zimowski, 1997). MGIRT imposes the same item parameters across groups, but the group means and variances are estimated freely. To examine DIF, the joint item characteristic curve (ICC) for each item from the overall analysis is compared with the group-specific ICCs. The distance between the two ICCs is quantified with a measure referred to as root mean square difference (RMSD; Yamamoto, 2013). If the two ICCs are close, it is an indication that there is no DIF and the item parameters from the joint model can explain the group performance (Buchholz & Hartig, 2019). RMSD ranges from 0 to 1 with 0 indicating perfect fit or the overlap of the two ICCs. Values smaller than .12 are considered acceptable in the context of international large-scale assessments in education (OECD, 2017).

MGIRT showed that the mean of girls was 0 ($SD=1$) while the mean of boys was -.23 ($SD=1.11$). That is, girls overall performed better than boys. Table 3 shows the RMSD values for girls and boys. As mentioned above, RMSD for each item shows the distance between the item ICC within

⁴ Due to the length of the tables, they are presented in the Appendix A.

the groups from the joint ICC. Smaller RMSD values in each group show that the item is closer to the overall ICC and the item does not exhibit DIF. Values smaller than .12 show that the item does not have DIF. Table 3 shows that the RMSD values for the girls (distance between the item ICC in the female group from the joint ICC) ranged from .013 to .104. For boys, the RMSD values ranged from .014 to .111. This is an indication that the items for girls and boys do not deviate from overall joint item characteristic curves and thus the items are free of DIF.

4. Discussion and Conclusion

Item response theory is frequently used to evaluate test quality (see Abdullaeva et al. [in press]; Hassan et al. [in press]; Korompot et al. [in press]) for some recent applications) In this analysis, the psychometric qualities of the Progress in the International Reading Literacy Study (PIRLS) 2021 for Kazakhstan were assessed using the 2PL IRT model. Item difficulty and discrimination parameters and fit values were examined. The analyses showed that some items have low discrimination values and have out of range infit and outfit values. However, considering that there are many items in PIRLS 2021, one can conclude that overall, the items had an acceptable fit to the 2PL IRT model. The RMSD fit statistic, which is commonly used in international large-scale assessments, were all lower than the cutoff value of .12 and showed a very good fit to the model. Measurement invariance across gender or gender DIF was examined using multiple-group item response theory and the findings showed that none of the items had gender DIF.

Furthermore, MGIRT showed that girls had a better performance than boys on the PIRLS test. This is the first study that evaluates the psychometric properties of the PIRLS within Kazakhstan. The findings of this study showed that the PIRLS is a fair and valid assessment and the conclusions based on the PIRLS data are trustworthy. Future research should examine the quality of the PIRLS using other psychometric properties and evaluate test fairness across other population groups.

The good fit of the 2PL IRT model to the PIRLS data underscores the validity of the test items in accurately measuring the reading comprehension abilities of fourth-grade students. This implies that PIRLS can reliably differentiate between students of varying reading abilities, making it a dependable instrument for educational assessments. The DIF analysis revealed that the test items functioned consistently across various subgroups, such as gender, socioeconomic status, and language background. This indicates that PIRLS provides a fair and unbiased measure of reading comprehension, ensuring equity in the assessment of diverse student populations.

Educators can utilize PIRLS data to gain insights into students' reading skills and identify areas that require targeted intervention. The robust nature of the assessment allows for accurate identification of reading strengths and weaknesses, facilitating the development of tailored instructional strategies to support student learning.

Policymakers can leverage the reliable data from PIRLS to make informed decisions about reading curricula and instructional practices. The evidence of the test's robustness supports its use in evaluating and improving reading education policies, helping to enhance literacy outcomes at the national and international levels. The robust psychometric properties of PIRLS suggest that it can serve as a valuable tool for longitudinal studies examining the development of reading skills over time. Future research could explore the stability of PIRLS scores across different cohorts and investigate factors influencing reading comprehension, such as instructional methods and educational environments. Our study confirms that PIRLS 2021 is a robust and reliable measure of reading comprehension for fourth-grade students. The strong psychometric properties of the test ensure its utility in educational assessment, policy development, and research, contributing to the ongoing efforts to improve literacy education worldwide.

The developers of the PIRLS state that before utilizing item response theory (IRT) methods to calculate student achievement estimates for analysis and reporting, it is crucial to conduct a thorough review of achievement item statistics to ensure data quality. They continue that the TIMSS & PIRLS International Study Center meticulously examines key diagnostic statistics for each item, country by country, to identify any items with unusual psychometric properties or irregular patterns in the data. For instance, an item that proves unexpectedly challenging or lacks discriminating power in a specific country may indicate issues with translation or technical errors. Likewise, a constructed-response item scored by humans with low reliability may signal problems with applying the scoring guide. If an item

is found to be problematic for a particular country, the research team at the TIMSS & PIRLS International Study Center investigates the country's translation verification records and digital instrument archives for errors or inaccuracies. In rare cases, the data associated with such items may be excluded from the international database (Bristol et al., 2023).

Despite the claims above, we noticed that many items with low discrimination and unacceptable infit and outfit values. The PIRLS documentation does not include item quality statistics by country. This study was an attempt to cast light on the test quality in a single country. Future research should continue this line of research and investigate the test quality in specific countries and discuss the implications for international decisions and ranking.

Declaration of Conflicting Interests

The authors declare that they have no competing interests.

Funding

Authors received no funding for this research.

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Appendix A

Table 1

Item Parameters

Item	Lable	Alpha	Beta	tau 1	tau 2	tau 3
1	RE41B01	1.60	-1.73	NA	NA	NA
2	RE41B02	1.27	-1.54	NA	NA	NA
3	RE41B03	0.70	-1.32	NA	NA	NA
4	RE41B04	1.39	-1.013	NA	NA	NA
5	RE41B05	1.06	-1.85	NA	NA	NA
6	RE41B06	0.54	-0.74	NA	NA	NA
7	RE41B07	0.91	-0.68	NA	NA	NA
8	RE41B08	0.95	-1.57	NA	NA	NA
9	RE41B09	0.89	0.098	NA	NA	NA
10	RE41B10	0.85	-0.41	NA	NA	NA
11	RE41B11	1.13	-1.17	NA	NA	NA
12	RE41B12	0.85	-1.93	NA	NA	NA
13	RE41B13	2.02	-0.26	-0.33	0.33	NA
14	RE41B14	1.29	-0.33	NA	NA	NA
15	RE41B15	0.60	0.83	NA	NA	NA
16	RE41B16	0.77	0.05	-0.29	0.295	NA
17	RE41B17	1.43	-0.47	-1.15	1.15	NA
18	RE51C02	0.65	-1.14	NA	NA	NA
19	RE51C03	1.52	1.26	NA	NA	NA
20	RE51C04	1.33	-1.26	NA	NA	NA
21	RE51C05	1.50	-0.40	-0.51	0.51	NA
22	RE51C06	1.09	0.86	-0.13	0.13	NA
23	RE51C08	1.17	-0.84	NA	NA	NA
24	RE51C09	1.60	-0.79	NA	NA	NA
25	RE51C10	1.39	-0.22	-0.61	0.61	NA
26	RE51C11	0.62	0.76	NA	NA	NA
27	RE51C12	1.38	-0.27	NA	NA	NA
28	RE51C14	1.18	1.33	0.03	-0.03	NA
29	RE51C15	1.45	1.51	NA	NA	NA
30	RE51D01	1.25	-1.26	NA	NA	NA

31	RE51D02	0.49	0.51	NA	NA	NA
32	RE51D03	1.76	-0.38	NA	NA	NA
33	RE51D04	1.32	-0.82	NA	NA	NA
34	RE51D05	1.54	-1.06	NA	NA	NA
35	RE51D06	1.35	-0.30	-0.66	0.66	NA
36	RE51D07	1.07	0.27	NA	NA	NA
37	RE51D08	1.26	-0.77	NA	NA	NA
38	RE51D09	0.72	0.10	NA	NA	NA
39	RE51D10	0.17	2.11	7.25	-7.25	NA
40	RE51D13	1.06	0.43	NA	NA	NA
41	RE51D14	1.52	-0.24	NA	NA	NA
42	RE51D15	0.85	1.39	0.29	-0.29	NA
43	RE51D16	1.28	0.72	NA	NA	NA
44	RE41E01	1.42	-1.34	NA	NA	NA
45	RE41E02	1.28	-0.42	NA	NA	NA
46	RE41E03	1.27	-1.28	NA	NA	NA
47	RE41E04	0.82	-0.36	NA	NA	NA
48	RE41E05	1.25	-1.19	NA	NA	NA
49	RE41E06	1.65	-1.11	NA	NA	NA
50	RE41E07	1.52	-0.15	0.03	-0.03	NA
51	RE41E08	0.60	1.12	NA	NA	NA
52	RE41E09	0.12	-2.36	NA	NA	NA
53	RE41E10	1.44	-1.59	NA	NA	NA
54	RE41E11	1.26	-0.45	NA	NA	NA
55	RE41E12	2.28	-1.34	NA	NA	NA
56	RE41E13	0.61	0.69	NA	NA	NA
57	RE41E14	0.53	0.64	-1.10	1.10	NA
58	RE41E15	1.82	-1.39	NA	NA	NA
59	RE41E17	0.86	-0.26	NA	NA	NA
60	RE41H01	1.85	-2.13	NA	NA	NA
61	RE41H02	1.62	-1.74	NA	NA	NA
62	RE41H03	0.72	1.16	NA	NA	NA
63	RE41H04	1.03	-2.24	NA	NA	NA
64	RE41H05	1.89	-1.73	NA	NA	NA
65	RE41H06	1.61	-1.48	NA	NA	NA
66	RE41H07	1.70	-0.9	NA	NA	NA
67	RE41H08	0.99	-0.60	NA	NA	NA
68	RE41H09	1.14	-1.18	NA	NA	NA
69	RE41H10	1.04	-0.07	NA	NA	NA
70	RE41H11	1.17	-0.25	NA	NA	NA
71	RE41H12	0.81	-1.24	NA	NA	NA
72	RE41H13	1.48	-0.42	NA	NA	NA
73	RE41H14	1.46	-1.02	NA	NA	NA
74	RE41H15	0.66	-0.66	NA	NA	NA

75	RE4IH16	1.14	-1.07	NA	NA	NA
76	RE4II01	0.94	-0.65	NA	NA	NA
77	RE4II02	0.85	0.40	NA	NA	NA
78	RE4II03	0.88	0.09	0.141	-0.14	NA
79	RE4II04	0.43	1.11	-1.21	1.21	NA
80	RE4II05	0.85	-0.44	NA	NA	NA
81	RE4II06	0.82	-0.09	NA	NA	NA
82	RE4II07	1.48	0.29	0.03	-0.03	NA
83	RE4II08	2.35	-0.97	NA	NA	NA
84	RE4II09	1.34	-0.19	NA	NA	NA
85	RE4II10	0.512	-0.03	NA	NA	NA
86	RE4II11	0.72	1.38	-1.34	1.34	NA
87	RE4II12	1.28	-0.19	NA	NA	NA
88	RE4II13	1.19	0.12	NA	NA	NA
89	RE4II14	0.56	-0.23	NA	NA	NA
90	RE4II15	1.03	0.83	NA	NA	NA
91	RE2IK01	0.81	-0.90	-0.55	0.55	NA
92	RE2IK02	1.07	-0.42	NA	NA	NA
93	RE2IK04	0.43	-1.02	NA	NA	NA
94	RE2IK05	1.05	1.05	NA	NA	NA
95	RE2IK06	0.86	0.92	NA	NA	NA
96	RE2IK07	0.60	1.05	-0.47	0.47	NA
97	RE2IK08	0.54	0.97	NA	NA	NA
98	RE2IK09	0.55	-0.43	NA	NA	NA
99	RE2IK10	0.72	2.54	0.28	-0.28	NA
100	RE2IK11	0.75	-0.02	NA	NA	NA
101	RE2IK12	1.06	0.14	-0.59	0.25	0.342
102	RE3IM01	2.96	-0.74	NA	NA	NA
103	RE3IM02	1.35	-1.36	NA	NA	NA
104	RE3IM03	1.13	-0.20	NA	NA	NA
105	RE3IM04	0.96	0.30	NA	NA	NA
106	RE3IM05	0.34	-0.81	NA	NA	NA
107	RE3IM06	0.45	-0.84	NA	NA	NA
108	RE3IM07	1.31	-1.21	NA	NA	NA
109	RE3IM08	1.35	-0.61	NA	NA	NA
110	RE3IM09	1.78	0.04	-1.04	1.04	NA
111	RE3IM10	0.77	-0.08	NA	NA	NA
112	RE3IM11	1.28	-0.79	NA	NA	NA
113	RE3IM12	1.06	0.09	NA	NA	NA
114	RE3IM13	1.28	-1.20	NA	NA	NA
115	RE3IM14	2.71	-0.60	NA	NA	NA
116	RE3IM15	1.72	-0.43	NA	NA	NA
117	RE3IM16	1.99	0.30	NA	NA	NA
118	RE4IM01	1.00	-2.48	NA	NA	NA

119	RE41M02	0.96	0.99	NA	NA	NA
120	RE41M03	1.04	-1.10	NA	NA	NA
121	RE41M04	0.85	-0.73	NA	NA	NA
122	RE41M05	1.75	-1.84	NA	NA	NA
123	RE41M06	1.00	-2.11	NA	NA	NA
124	RE41M07	0.99	-1.35	NA	NA	NA
125	RE41M08	1.84	-1.27	NA	NA	NA
126	RE41M09	1.56	-1.06	NA	NA	NA
127	RE41M10	1.23	-1.48	-0.15	0.15	NA
128	RE41M11	0.99	-0.51	NA	NA	NA
129	RE41M12	1.61	-0.91	NA	NA	NA
130	RE41M13	1.74	-1.35	NA	NA	NA
131	RE41M14	1.31	-0.15	-0.54	0.20	0.337
132	RE41M15	0.29	0.24	NA	NA	NA
133	RE41M16	1.76	-1.09	NA	NA	NA
134	RE41M17	1.07	0.87	NA	NA	NA
135	RE41M18	1.42	-0.39	NA	NA	NA
136	RE51N01	1.31	-1.30	NA	NA	NA
137	RE51N03	0.40	4.33	NA	NA	NA
138	RE51N04	0.89	-0.04	NA	NA	NA
139	RE51N05	0.51	1.39	NA	NA	NA
140	RE51N07	0.82	-0.96	NA	NA	NA
141	RE51N08	0.87	-0.33	NA	NA	NA
142	RE51N11	1.19	1.36	NA	NA	NA
143	RE51N12	0.78	2.26	NA	NA	NA
144	RE51N14	0.73	1.77	NA	NA	NA
145	RE51N15	0.74	3.12	NA	NA	NA
146	RE41O01	1.48	-1.13	NA	NA	NA
147	RE41O02	1.44	-1.09	NA	NA	NA
148	RE41O03	1.45	1.88	NA	NA	NA
149	RE41O04	1.04	0.58	0.120	-0.12	NA
150	RE41O05	0.72	1.92	0.33	-0.33	NA
151	RE41O06	1.25	-0.67	NA	NA	NA
152	RE41O07	0.91	-0.80	0.26	-0.26	NA
153	RE41O08	1.18	0.24	NA	NA	NA
154	RE41O09	1.44	0.11	NA	NA	NA
155	RE41O10	1.52	0.32	-0.25	0.25	NA
156	RE41O11	1.01	-0.24	NA	NA	NA
157	RE41O12	1.46	-0.13	NA	NA	NA
158	RE41O13	1.35	0.62	0.40	0.01	-0.418
159	RE31P01	1.05	-0.53	NA	NA	NA
160	RE31P02	1.51	-1.56	NA	NA	NA
161	RE31P03	0.77	-0.61	0.05	-0.05	NA
162	RE31P04	1.52	-0.68	NA	NA	NA

163	RE31P05	1.41	-1.54	NA	NA	NA
164	RE31P06	1.43	-1.06	NA	NA	NA
165	RE31P07	1.61	-0.096	NA	NA	NA
166	RE31P08	1.66	-1.35	NA	NA	NA
167	RE31P09	1.37	-0.58	NA	NA	NA
168	RE31P10	0.84	-1.13	NA	NA	NA
169	RE31P11	1.56	0.28	0.19	-0.19	NA
170	RE31P12	1.61	0.04	NA	NA	NA
171	RE31P13	2.02	-0.32	NA	NA	NA
172	RE51R01	1.52	-1.34	NA	NA	NA
173	RE51R02	1.56	-1.59	NA	NA	NA
174	RE51R03	2.64	-2.24	NA	NA	NA
175	RE51R04	0.95	-0.048	NA	NA	NA
176	RE51R06	1.62	-1.38	NA	NA	NA
177	RE51R07	1.36	-0.45	NA	NA	NA
178	RE51R08	1.06	-1.3	NA	NA	NA
179	RE51R09	0.92	-0.26	NA	NA	NA
180	RE51R10	1.14	-0.24	NA	NA	NA
181	RE51R11	0.77	-0.77	NA	NA	NA
182	RE51R13	0.88	0.39	NA	NA	NA
183	RE51R14	0.88	-2.18	NA	NA	NA
184	RE51R16	0.74	-0.38	NA	NA	NA
185	RE51T01	2.09	-2.02	NA	NA	NA
186	RE51T02	0.19	0.93	NA	NA	NA
187	RE51T03	0.72	-1.49	NA	NA	NA
188	RE51T04	1.32	0.12	NA	NA	NA
189	RE51T06	1.54	-0.81	NA	NA	NA
190	RE51T07	1.46	-0.76	NA	NA	NA
191	RE51T08	1.56	-1.72	NA	NA	NA
192	RE51T09	0.60	-0.09	NA	NA	NA
193	RE51T10	1.36	-0.24	NA	NA	NA
194	RE51T11	1.38	-0.57	0.46	-0.46	NA
195	RE51T12	1.25	-0.27	NA	NA	NA
196	RE51T13	1.05	0.52	-0.38	0.38	NA
197	RE51T15	1.18	0.73	-0.16	0.16	NA
198	RE51T16	1.07	0.07	-1.34	1.34	NA
199	RE31U01	0.68	-2.36	NA	NA	NA
200	RE31U02	1.58	-2.04	NA	NA	NA
201	RE31U03	1.62	-0.99	NA	NA	NA
202	RE31U04	0.97	-1.33	NA	NA	NA
203	RE31U05	1.41	-1.33	NA	NA	NA
204	RE31U06	1.31	-1.42	NA	NA	NA
205	RE31U07	0.70	-0.01	NA	NA	NA
206	RE31U08	1.06	-0.48	NA	NA	NA

207	RE31U09	1.66	-1.49	NA	NA	NA
208	RE31U10	1.38	-0.49	NA	NA	NA
209	RE31U11	0.66	-1.66	-0.16	0.16	NA
210	RE31U13	1.84	-1.76	NA	NA	NA
211	RE31U14	0.62	0.09	NA	NA	NA
212	RE31W01	0.77	-0.50	-0.57	0.57	NA
213	RE31W02	0.80	0.92	-0.24	0.24	NA
214	RE31W03	1.30	0.47	NA	NA	NA
215	RE31W04	1.76	-0.18	NA	NA	NA
216	RE31W05	0.93	0.57	NA	NA	NA
217	RE31W06	1.30	-1.01	NA	NA	NA
218	RE31W08	1.50	-0.36	NA	NA	NA
219	RE31W09	0.84	1.32	NA	NA	NA
220	RE31W10	1.05	0.57	NA	NA	NA
221	RE31W11	2.25	0.90	NA	NA	NA
222	RE31W12	0.71	1.10	NA	NA	NA
223	RE31W13	0.76	1.57	NA	NA	NA
224	RE21Y01	1.14	0.11	NA	NA	NA
225	RE21Y02	1.51	-1.12	NA	NA	NA
226	RE21Y03	0.73	1.57	NA	NA	NA
227	RE21Y04	0.78	0.00	NA	NA	NA
228	RE21Y05	1.48	-0.7	NA	NA	NA
229	RE21Y06	1.18	-0.02	NA	NA	NA
230	RE21Y07	1.22	-1.18	NA	NA	NA
231	RE21Y08	0.93	-0.96	NA	NA	NA
232	RE21Y09	2.00	-0.42	-0.20	0.20	NA
233	RE21Y10	1.54	0.95	NA	NA	NA
234	RE21Y11	1.30	-0.37	NA	NA	NA
235	RE21Y12	1.08	0.40	0.89	-0.89	NA
236	RE21Y13	1.28	-0.01	-1.22	0.56	0.661
237	RE21Y14	0.78	0.27	0.73	-0.73	NA
238	RE51Z02	0.86	-1.70	NA	NA	NA
239	RE51Z03	0.97	0.22	NA	NA	NA
240	RE51Z04	1.30	-1.18	NA	NA	NA
241	RE51Z05	1.61	0.72	NA	NA	NA
242	RE51Z06	1.52	-1.21	-0.36	0.36	NA
243	RE51Z07	2.18	-1.10	NA	NA	NA
244	RE51Z08	1.10	0.32	NA	NA	NA
245	RE51Z09	1.35	0.80	NA	NA	NA
246	RE51Z10	2.27	-0.12	NA	NA	NA
247	RE51Z11	1.54	-0.79	NA	NA	NA
248	RE51Z12	1.25	-0.15	-0.30	0.30	NA
249	RE51Z13	1.39	-0.50	NA	NA	NA
250	RE51Z14	0.99	-0.52	0.23	0.06	-0.292

251	RE51Z15	1.25	0.16	NA	NA	NA
252	E051O01	0.63	-0.41	NA	NA	NA
253	E051O02	0.99	-0.81	NA	NA	NA
254	E051O03	0.84	-0.72	NA	NA	NA
255	E051O04	0.84	-0.71	NA	NA	NA
256	E051O05	1.54	-0.59	NA	NA	NA
257	E051O06	1.01	-0.93	NA	NA	NA
258	E051O07	0.58	-1.37	NA	NA	NA
259	E051O08	0.67	-0.02	0.66	-0.66	NA
260	E051O09	1.95	-0.61	NA	NA	NA
261	E051O10	1.02	-0.56	0.024	-0.02	NA
262	E051O11	0.58	1.94	NA	NA	NA
263	E051O12	0.41	0.98	-0.65	0.65	NA
264	E051O13	0.88	-0.76	0.12	-0.12	NA
265	E051O14	0.76	-1.39	NA	NA	NA
266	E051O15	0.62	2.27	NA	NA	NA
267	E051O16	0.76	-0.07	NA	NA	NA
268	E051O17	1.37	0.82	NA	NA	NA
269	E051O18	0.37	1.29	-0.39	0.39	NA
270	E041R01	0.76	0.33	NA	NA	NA
271	E041R02	1.18	-1.75	NA	NA	NA
272	E041R04	0.55	2.24	NA	NA	NA
273	E041R05	0.67	0.12	NA	NA	NA
274	E041R06	1.03	-0.56	NA	NA	NA
275	E041R08	0.93	0.41	NA	NA	NA
276	E041R09	0.86	0.29	NA	NA	NA
277	E041R10	1.22	-0.13	NA	NA	NA
278	E041R11	0.81	0.33	-0.24	0.24	NA
279	E041R12	1.03	-0.31	NA	NA	NA
280	E041R13	0.67	-0.41	NA	NA	NA
281	E041R14	0.91	-0.36	NA	NA	NA
282	E041R15	1.87	0.44	NA	NA	NA
283	E041R16	0.75	0.75	NA	NA	NA
284	E041T01	0.52	0.23	NA	NA	NA
285	E041T02	1.08	-1.42	NA	NA	NA
286	E041T03	0.82	-0.24	NA	NA	NA
287	E041T04	1.04	-0.97	NA	NA	NA
288	E041T05	0.96	-0.81	-0.85	0.85	NA
289	E041T06	1.32	0.12	NA	NA	NA
290	E041T08	1.04	-0.37	NA	NA	NA
291	E041T09	0.88	0.90	NA	NA	NA
292	E041T10	1.43	0.02	NA	NA	NA
293	E041T11	1.57	-0.20	NA	NA	NA
294	E041T12	0.63	-1.28	NA	NA	NA

295	E041T13	0.74	-0.04	NA	NA	NA
296	E041T14	0.83	0.41	NA	NA	NA
297	E041T15	1.26	-0.09	NA	NA	NA
298	E041T16	1.41	-1.05	NA	NA	NA
299	E041T17	1.49	0.67	NA	NA	NA
300	E051V01	0.31	-0.59	NA	NA	NA
301	E051V02	1.05	-0.96	NA	NA	NA
302	E051V03	1.42	1.01	NA	NA	NA
303	E051V04	0.52	2.48	-0.85	0.85	NA
304	E051V05	0.95	0.10	NA	NA	NA
305	E051V06	0.88	0.66	NA	NA	NA
306	E051V07	0.80	-0.45	NA	NA	NA
307	E051V08	1.04	-0.21	NA	NA	NA
308	E051V10	0.81	1.97	NA	NA	NA
309	E051V11	1.22	-0.59	NA	NA	NA
310	E051V12	0.24	-0.70	NA	NA	NA
311	E051V13	1.83	-2.02	NA	NA	NA
312	E051V14	1.24	-0.42	NA	NA	NA
313	E051V15	0.69	0.64	0.20	-0.20	NA
314	E051V16	1.44	-0.13	NA	NA	NA
315	E051V19A	0.98	3.08	NA	NA	NA
316	E051V20	0.92	2.16	NA	NA	NA
317	E041Z01	0.55	-1.04	NA	NA	NA
318	E041Z02	0.73	0.53	0.27	-0.27	NA
319	E041Z03	0.61	-0.88	NA	NA	NA
320	E041Z04	0.94	-1.45	NA	NA	NA
321	E041Z05	0.58	-0.60	NA	NA	NA
322	E041Z06	1.35	0.42	NA	NA	NA
323	E041Z07	0.86	-0.37	NA	NA	NA
324	E041Z08	0.53	0.11	NA	NA	NA
325	E041Z09	0.75	0.62	NA	NA	NA
326	E041Z10	0.32	2.85	NA	NA	NA
327	E041Z11	1.22	-1.41	NA	NA	NA
328	E041Z12	0.78	0.19	NA	NA	NA
329	E041Z13	1.45	-0.93	NA	NA	NA
330	E041Z14	1.80	-0.61	-0.23	0.23	NA
331	E041Z15	0.94	-0.35	NA	NA	NA
332	E041Z16	1.04	0.13	-0.23	0.23	NA
333	E041Z17	0.59	1.24	NA	NA	NA
334	E041Z18	0.77	-0.15	NA	NA	NA
335	E041Z19	1.08	0.94	-0.49	0.49	NA
336	RE51C01	0.75	1.23	0.50	-0.50	NA
337	RE51C07	0.68	-0.38	NA	NA	NA
338	RE51C13	1.01	0.34	-0.2	0.27	NA

339	RE51D11	1.26	0.00	-0.48	0.48	NA
340	RE51D12	1.02	-0.18	-0.59	-1.06	1.664
341	RE41E16	1.07	-0.27	NA	NA	NA
342	RE31M17	0.64	-0.25	-0.54	0.35	0.193
343	RE51N02	0.86	0.72	0.12	-0.12	NA
344	RE51N06	1.06	0.54	-0.00	0.00	NA
345	RE51N09	1.02	0.52	-0.05	0.05	NA
346	RE51N10	1.02	2.53	NA	NA	NA
347	RE51N13	1.29	0.27	-0.31	0.31	NA
348	RE31P14	0.88	0.21	NA	NA	NA
349	RE51R05	0.94	-0.43	0.64	-0.64	NA
350	RE51R15	1.79	-0.45	NA	NA	NA
351	RE51R17	1.32	-0.46	-0.51	0.51	NA
352	RE51T05	0.53	-0.11	1.91	-1.91	NA
353	RE51T14	1.04	0.73	NA	NA	NA
354	RE31U12	2.44	-1.01	NA	NA	NA
355	RE31W07	1.25	0.77	0.027	-0.25	0.227
356	RE51Z01	0.90	0.47	-0.46	0.46	NA
357	E041R03	1.18	0.08	-0.19	0.19	NA
358	E041R07	1.50	0.81	-0.06	0.06	NA
359	E041T18	0.59	1.44	NA	NA	NA
360	E051V09	0.67	0.53	-0.29	0.29	NA
361	E051V17	0.93	0.97	0.06	-0.06	NA
362	E051V18	1.03	1.52	NA	NA	NA
363	E041Z20	0.92	0.33	-0.38	0.38	NA

Table 2
Item Fit Statistics

Item	Lable	Outfit	Infit	RMSD
1	RE41B01	1.09	0.94	0.01
2	RE41B02	1.02	0.96	0.01
3	RE41B03	1.08	1.04	0.03
4	RE41B04	1.03	1.02	0.01
5	RE41B05	1.19	1.06	0.02
6	RE41B06	1.00	1.00	0.03
7	RE41B07	0.98	0.98	0.03
8	RE41B08	1.15	1.02	0.08
9	RE41B09	0.92	0.95	0.04
10	RE41B10	1.02	1.00	0.04
11	RE41B11	1.059	1.064	0.021
12	RE41B12	1.004	0.967	0.04
13	RE41B13	1.012	1.028	0.028
14	RE41B14	1.155	1.074	0.022
15	RE41B15	1.01	1.023	0.055

16	RE41B16	0.969	0.976	0.031
17	RE41B17	1.036	1.035	0.029
18	RE51C02	0.915	0.944	0.026
19	RE51C03	1.008	1.036	0.02
20	RE51C04	0.89	0.97	0.016
21	RE51C05	1.034	1.054	0.025
22	RE51C06	0.987	1.039	0.016
23	RE51C08	0.981	0.98	0.032
24	RE51C09	1.086	1.048	0.022
25	RE51C10	0.992	1.002	0.029
26	RE51C11	0.969	0.963	0.042
27	RE51C12	1	0.999	0.051
28	RE51C14	0.957	0.996	0.019
29	RE51C15	0.944	1.026	0.012
30	RE51D01	0.987	1.029	0.024
31	RE51D02	1.01	1.013	0.055
32	RE51D03	1.063	1.044	0.014
33	RE51D04	0.986	1.005	0.023
34	RE51D05	1.053	1.033	0.022
35	RE51D06	0.997	0.98	0.031
36	RE51D07	0.982	1	0.041
37	RE51D08	1.031	1.031	0.045
38	RE51D09	0.944	0.946	0.053
39	RE51D10	0.995	0.998	0.014
40	RE51D13	0.983	1.019	0.018
41	RE51D14	1.032	1.038	0.02
42	RE51D15	1.213	0.986	0.021
43	RE51D16	1.01	1.003	0.016
44	RE41E01	0.967	0.965	0.019
45	RE41E02	0.953	0.986	0.013
46	RE41E03	0.838	0.984	0.046
47	RE41E04	1.003	0.998	0.043
48	RE41E05	0.963	1.022	0.032
49	RE41E06	0.895	0.994	0.021
50	RE41E07	0.994	0.989	0.045
51	RE41E08	0.986	0.975	0.054
52	RE41E09	1.013	1.013	0.041
53	RE41E10	1.077	0.965	0.021
54	RE41E11	0.941	0.973	0.044
55	RE41E12	1.008	1.006	0.022
56	RE41E13	0.996	1.005	0.041
57	RE41E14	0.959	0.965	0.045
58	RE41E15	1.366	1.077	0.046
59	RE41E17	0.939	0.951	0.022

60	RE41H01	0.655	0.977	0.008
61	RE41H02	1.653	1.038	0.021
62	RE41H03	1.091	1.037	0.053
63	RE41H04	0.811	0.892	0.035
64	RE41H05	1.041	0.896	0.027
65	RE41H06	1.069	0.96	0.029
66	RE41H07	1.011	1.019	0.038
67	RE41H08	0.927	0.965	0.017
68	RE41H09	0.974	0.957	0.015
69	RE41H10	0.998	1.007	0.015
70	RE41H11	1.022	1.003	0.027
71	RE41H12	0.962	1.001	0.044
72	RE41H13	0.942	0.996	0.016
73	RE41H14	0.984	0.969	0.022
74	RE41H15	0.983	0.989	0.046
75	RE41H16	0.947	0.999	0.065
76	RE41I01	0.932	0.95	0.021
77	RE41I02	0.999	1.001	0.029
78	RE41I03	0.968	0.959	0.023
79	RE41I04	1.005	1.011	0.024
80	RE41I05	0.993	0.994	0.025
81	RE41I06	0.995	0.99	0.046
82	RE41I07	0.956	1.015	0.021
83	RE41I08	1.005	1.114	0.017
84	RE41I09	1.05	0.999	0.057
85	RE41I10	0.981	0.981	0.047
86	RE41I11	1.004	1.008	0.017
87	RE41I12	1.015	1.011	0.027
88	RE41I13	1.021	1.005	0.025
89	RE41I14	0.995	0.996	0.018
90	RE41I15	1.007	1.005	0.013
91	RE21K01	0.954	0.963	0.024
92	RE21K02	1.053	1.03	0.027
93	RE21K04	1.005	1.001	0.021
94	RE21K05	0.965	0.999	0.019
95	RE21K06	1.084	1.019	0.054
96	RE21K07	1.06	1.015	0.035
97	RE21K08	0.97	0.978	0.024
98	RE21K09	0.97	0.978	0.053
99	RE21K10	0.97	1.045	0.025
100	RE21K11	1.015	1.012	0.028
101	RE21K12	1.033	1.008	0.025
102	RE31M01	0.877	1.111	0.023
103	RE31M02	1.101	1.081	0.031

104	RE31M03	0.947	0.966	0.069
105	RE31M04	0.925	0.941	0.047
106	RE31M05	0.988	0.989	0.034
107	RE31M06	0.984	0.986	0.035
108	RE31M07	0.946	1.052	0.061
109	RE31M08	0.981	0.997	0.013
110	RE31M09	1	0.989	0.02
111	RE31M10	0.991	0.985	0.061
112	RE31M11	0.923	0.967	0.011
113	RE31M12	0.965	0.949	0.035
114	RE31M13	0.854	1.036	0.063
115	RE31M14	0.996	1.063	0.033
116	RE31M15	0.939	1.039	0.041
117	RE31M16	1.255	1.036	0.019
118	RE41M01	1.253	1.006	0.019
119	RE41M02	1.231	1.043	0.077
120	RE41M03	0.983	1.034	0.043
121	RE41M04	0.953	0.963	0.03
122	RE41M05	1.244	1.025	0.024
123	RE41M06	1.031	0.995	0.032
124	RE41M07	0.991	1.024	0.016
125	RE41M08	1.092	1.042	0.02
126	RE41M09	0.941	1.001	0.011
127	RE41M10	1.381	1.076	0.022
128	RE41M11	0.989	0.987	0.023
129	RE41M12	1.19	1.054	0.012
130	RE41M13	0.728	0.944	0.023
131	RE41M14	0.968	0.991	0.025
132	RE41M15	1.002	1.002	0.071
133	RE41M16	0.861	0.975	0.014
134	RE41M17	0.998	0.999	0.019
135	RE41M18	1.127	1.056	0.029
136	RE51N01	1.062	1.04	0.012
137	RE51N03	1.053	1.034	0.031
138	RE51N04	0.952	0.963	0.031
139	RE51N05	0.969	0.983	0.039
140	RE51N07	1.021	1.01	0.029
141	RE51N08	0.971	0.994	0.04
142	RE51N11	1.126	1.031	0.027
143	RE51N12	1.027	1.025	0.025
144	RE51N14	1.003	0.998	0.021
145	RE51N15	0.94	0.99	0.019
146	RE41O01	1.077	0.938	0.021
147	RE41O02	0.98	0.975	0.018

148	RE41O03	1.209	0.998	0.013
149	RE41O04	1.053	1.043	0.019
150	RE41O05	1.023	1.092	0.028
151	RE41O06	0.926	0.992	0.032
152	RE41O07	0.997	0.988	0.016
153	RE41O08	0.977	0.995	0.071
154	RE41O09	1.01	0.994	0.038
155	RE41O10	0.919	0.956	0.027
156	RE41O11	1.02	1.018	0.019
157	RE41O12	1.037	1.011	0.025
158	RE41O13	1.06	1.053	0.022
159	RE31P01	1.001	1.013	0.026
160	RE31P02	0.898	0.951	0.013
161	RE31P03	0.977	0.987	0.021
162	RE31P04	0.96	0.974	0.012
163	RE31P05	0.948	0.965	0.016
164	RE31P06	0.915	0.955	0.026
165	RE31P07	0.978	1.014	0.024
166	RE31P08	0.77	1.006	0.024
167	RE31P09	1.089	1.051	0.056
168	RE31P10	0.969	1.007	0.042
169	RE31P11	1.109	1.066	0.012
170	RE31P12	1.062	1.029	0.034
171	RE31P13	1.09	0.978	0.029
172	RE51R01	1.024	0.983	0.029
173	RE51R02	0.936	1.024	0.033
174	RE51R03	28.097	0.88	0.017
175	RE51R04	0.982	0.991	0.032
176	RE51R06	0.865	1.088	0.064
177	RE51R07	1.032	1.005	0.029
178	RE51R08	1	0.99	0.031
179	RE51R09	0.947	0.963	0.041
180	RE51R10	0.936	0.945	0.042
181	RE51R11	0.968	0.979	0.03
182	RE51R13	0.976	0.976	0.032
183	RE51R14	1.002	1.023	0.026
184	RE51R16	1.002	0.999	0.044
185	RE51T01	1.798	1.029	0.015
186	RE51T02	0.993	0.993	0.035
187	RE51T03	1.078	1.027	0.023
188	RE51T04	0.989	1.001	0.035
189	RE51T06	0.999	1.005	0.033
190	RE51T07	0.958	0.98	0.029
191	RE51T08	1.241	1.159	0.03

192	RE51T09	0.982	0.985	0.021
193	RE51T10	0.986	0.974	0.035
194	RE51T11	1.001	1.006	0.02
195	RE51T12	1.023	1.008	0.009
196	RE51T13	0.97	0.989	0.019
197	RE51T15	1.021	0.988	0.021
198	RE51T16	1.054	1.053	0.031
199	RE31U01	0.993	1.027	0.052
200	RE31U02	0.897	0.963	0.02
201	RE31U03	1.194	1.067	0.029
202	RE31U04	1.104	1.029	0.051
203	RE31U05	1.068	0.993	0.028
204	RE31U06	1.193	1.036	0.033
205	RE31U07	0.966	0.975	0.034
206	RE31U08	0.998	0.998	0.021
207	RE31U09	1.153	1.005	0.033
208	RE31U10	0.931	0.949	0.014
209	RE31U11	1.167	1.004	0.04
210	RE31U13	1.059	1.075	0.015
211	RE31U14	0.995	1.002	0.072
212	RE31W01	1.009	0.999	0.018
213	RE31W02	1	1.015	0.029
214	RE31W03	1.031	0.993	0.039
215	RE31W04	0.937	0.942	0.03
216	RE31W05	1.033	1.004	0.019
217	RE31W06	0.969	0.992	0.01
218	RE31W08	1.104	1	0.034
219	RE31W09	0.942	0.919	0.034
220	RE31W10	1.059	1.016	0.026
221	RE31W11	1.012	1.047	0.018
222	RE31W12	1.039	0.996	0.06
223	RE31W13	0.983	0.994	0.023
224	RE21Y01	1.018	0.987	0.039
225	RE21Y02	0.824	0.984	0.033
226	RE21Y03	1.014	1.008	0.023
227	RE21Y04	1.016	1.003	0.049
228	RE21Y05	1.003	1.038	0.03
229	RE21Y06	0.956	0.943	0.046
230	RE21Y07	1.048	0.991	0.03
231	RE21Y08	0.913	0.951	0.015
232	RE21Y09	1.023	0.97	0.038
233	RE21Y10	1.081	1.062	0.013
234	RE21Y11	0.967	0.988	0.028
235	RE21Y12	0.974	0.978	0.023

236	RE21Y13	0.985	0.988	0.018
237	RE21Y14	1.006	1.02	0.039
238	RE51Z02	1.029	1.035	0.032
239	RE51Z03	1.119	1.03	0.049
240	RE51Z04	1.073	1.048	0.029
241	RE51Z05	0.998	0.981	0.028
242	RE51Z06	1.015	1.001	0.022
243	RE51Z07	0.733	0.979	0.017
244	RE51Z08	1.014	0.989	0.025
245	RE51Z09	0.927	1.01	0.046
246	RE51Z10	1.199	1.05	0.034
247	RE51Z11	0.826	0.899	0.012
248	RE51Z12	1.031	1.029	0.026
249	RE51Z13	1.186	1.073	0.029
250	RE51Z14	1.19	0.995	0.029
251	RE51Z15	1.03	1.003	0.026
252	E051O01	0.991	0.991	0.033
253	E051O02	0.99	1.017	0.031
254	E051O03	0.969	0.998	0.035
255	E051O04	0.936	0.968	0.03
256	E051O05	1.055	0.997	0.019
257	E051O06	0.963	0.997	0.021
258	E051O07	1.017	1.003	0.028
259	E051O08	1.012	1.02	0.025
260	E051O09	1.087	0.987	0.013
261	E051O10	0.999	0.995	0.017
262	E051O11	1.04	1.046	0.028
263	E051O12	0.984	1	0.029
264	E051O13	0.996	0.992	0.026
265	E051O14	1.03	1.047	0.025
266	E051O15	1.028	1.018	0.03
267	E051O16	0.981	0.995	0.028
268	E051O17	0.909	0.995	0.029
269	E051O18	0.965	0.964	0.018
270	E041R01	0.965	0.974	0.025
271	E041R02	0.938	0.929	0.02
272	E041R04	1.087	1.036	0.048
273	E041R05	1.013	1.012	0.038
274	E041R06	1.008	1.02	0.017
275	E041R08	1.039	1.036	0.009
276	E041R09	1.014	1.013	0.027
277	E041R10	1.034	0.998	0.03
278	E041R11	1.017	1.017	0.038
279	E041R12	1.024	1.012	0.042

280	E041R13	0.986	0.994	0.025
281	E041R14	1.016	1.005	0.013
282	E041R15	1.071	1.016	0.01
283	E041R16	0.958	0.979	0.036
284	E041T01	1.002	0.999	0.056
285	E041T02	0.885	0.968	0.02
286	E041T03	1.027	1.014	0.02
287	E041T04	0.917	0.945	0.03
288	E041T05	1.036	1.037	0.029
289	E041T06	1.006	1.005	0.01
290	E041T08	1.037	1.019	0.039
291	E041T09	0.957	0.984	0.021
292	E041T10	1.049	1.038	0.016
293	E041T11	1	0.992	0.019
294	E041T12	1.019	1.023	0.026
295	E041T13	1.029	1.023	0.021
296	E041T14	1.008	1.015	0.044
297	E041T15	1.018	0.992	0.028
298	E041T16	1.024	1.029	0.02
299	E041T17	0.977	1.005	0.012
300	E051V01	1.003	1.004	0.029
301	E051V02	1.076	0.976	0.019
302	E051V03	0.994	1.051	0.031
303	E051V04	1.07	1.075	0.028
304	E051V05	1.033	1.032	0.014
305	E051V06	1.052	1.021	0.026
306	E051V07	0.976	0.998	0.032
307	E051V08	1.014	1.009	0.044
308	E051V10	1	0.995	0.016
309	E051V11	1.036	1.009	0.019
310	E051V12	0.999	1	0.025
311	E051V13	1.486	0.957	0.024
312	E051V14	1.047	1.007	0.03
313	E051V15	0.939	0.968	0.028
314	E051V16	0.972	1	0.02
315	E051V19A	1.003	1.068	0.016
316	E051V20	1.109	1.056	0.017
317	E041Z01	1.005	1.002	0.021
318	E041Z02	1.013	1.017	0.015
319	E041Z03	0.976	0.983	0.048
320	E041Z04	1.057	1.041	0.028
321	E041Z05	0.998	1.002	0.022
322	E041Z06	0.952	1.009	0.034
323	E041Z07	1.002	1.008	0.027

324	E041Z08	1.002	0.998	0.031
325	E041Z09	0.993	1.001	0.024
326	E041Z10	1.018	1.019	0.024
327	E041Z11	0.975	0.986	0.023
328	E041Z12	1.022	1.02	0.032
329	E041Z13	1.032	0.988	0.022
330	E041Z14	1.06	1.03	0.017
331	E041Z15	0.978	0.985	0.047
332	E041Z16	0.969	0.974	0.023
333	E041Z17	1.028	1.02	0.032
334	E041Z18	0.983	0.983	0.028
335	E041Z19	0.966	0.977	0.016
336	RE51C01	0.914	0.964	0.025
337	RE51C07	1.001	0.994	0.033
338	RE51C13	0.959	0.988	0.039
339	RE51D11	1.079	1.062	0.042
340	RE51D12	1.074	1.042	0.028
341	RE41E16	0.994	1.006	0.033
342	RE31M17	1.043	0.991	0.039
343	RE51N02	1.012	1	0.032
344	RE51N06	1.101	1.065	0.028
345	RE51N09	0.996	1.02	0.026
346	RE51N10	1.097	1.046	0.01
347	RE51N13	0.961	0.987	0.047
348	RE31P14	1.041	1.023	0.031
349	RE51R05	0.971	1.019	0.022
350	RE51R15	1.088	1.041	0.009
351	RE51R17	0.927	0.922	0.044
352	RE51T05	0.999	0.987	0.043
353	RE51T14	1.005	1.008	0.053
354	RE31U12	1.068	1.051	0.032
355	RE31W07	1.03	1.005	0.016
356	RE51Z01	1.066	1.062	0.023
357	E041R03	1.03	1.02	0.032
358	E041R07	1.034	1.038	0.015
359	E041T18	1.006	0.992	0.048
360	E051V09	0.991	0.989	0.028
361	E051V17	0.992	1.006	0.029
362	E051V18	1.04	1.002	0.022
363	E041Z20	0.957	0.97	0.033

Table 3
RMSD and MD Values across Gender

Item	Item Lable	RMSD-Male	RMSD-Female	MD-Male	MD-Female
1	RE41B01	0.03	0.032	0.02	-0.016
2	RE41B02	0.047	0.037	0.006	0.001
3	RE41B03	0.052	0.056	-0.014	0.016
4	RE41B04	0.038	0.04	0.027	-0.022
5	RE41B05	0.042	0.047	0.021	-0.027
6	RE41B06	0.048	0.058	-0.034	0.025
7	RE41B07	0.074	0.095	-0.049	0.047
8	RE41B08	0.088	0.107	-0.023	0.039
9	RE41B09	0.07	0.078	0.046	-0.044
10	RE41B10	0.081	0.111	-0.025	0.028
11	RE41B11	0.05	0.069	-0.009	0.015
12	RE41B12	0.022	0.063	-0.006	0.008
13	RE41B13	0.051	0.048	0.01	-0.022
14	RE41B14	0.051	0.027	-0.009	-0.002
15	RE41B15	0.038	0.085	-0.016	0.015
16	RE41B16	0.068	0.067	-0.005	0.014
17	RE41B17	0.054	0.062	0.011	-0.014
18	RE51C02	0.071	0.071	-0.003	0.01
19	RE51C03	0.038	0.056	0.021	-0.015
20	RE51C04	0.056	0.057	-0.023	0.028
21	RE51C05	0.028	0.029	0.011	-0.007
22	RE51C06	0.021	0.034	0.009	0.002
23	RE51C08	0.055	0.042	-0.022	0.019
24	RE51C09	0.042	0.036	0.017	-0.018
25	RE51C10	0.045	0.041	-0.018	0.005
26	RE51C11	0.033	0.061	0.012	-0.016
27	RE51C12	0.054	0.07	-0.029	0.032
28	RE51C14	0.054	0.042	0.071	-0.065
29	RE51C15	0.061	0.061	-0.03	0.028
30	RE51D01	0.048	0.038	-0.023	0.023
31	RE51D02	0.069	0.077	0.033	-0.026
32	RE51D03	0.028	0.028	0.017	-0.02
33	RE51D04	0.031	0.059	0.005	-0.005
34	RE51D05	0.049	0.014	-0.001	0.003
35	RE51D06	0.07	0.058	-0.006	-0.003
36	RE51D07	0.059	0.034	0.004	0.005
37	RE51D08	0.047	0.094	0.036	-0.032
38	RE51D09	0.057	0.064	0	-0.007
39	RE51D10	0.039	0.039	0.009	-0.013
40	RE51D13	0.028	0.035	-0.011	0.014
41	RE51D14	0.031	0.03	0.01	-0.014

42	RE51D15	0.053	0.061	-0.016	0.014
43	RE51D16	0.056	0.056	0.041	-0.043
44	RE41E01	0.037	0.022	0	0.001
45	RE41E02	0.045	0.026	-0.004	0.009
46	RE41E03	0.036	0.075	0.006	-0.018
47	RE41E04	0.028	0.056	-0.008	0.012
48	RE41E05	0.033	0.045	-0.009	0.003
49	RE41E06	0.071	0.045	-0.01	0.017
50	RE41E07	0.103	0.102	0.085	-0.105
51	RE41E08	0.048	0.069	-0.004	0.003
52	RE41E09	0.053	0.068	0.021	-0.027
53	RE41E10	0.083	0.05	0.035	-0.032
54	RE41E11	0.071	0.06	-0.03	0.033
55	RE41E12	0.043	0.033	0.003	0.003
56	RE41E13	0.073	0.078	-0.001	0.02
57	RE41E14	0.055	0.051	-0.017	0.033
58	RE41E15	0.035	0.056	0.003	0
59	RE41E17	0.03	0.043	0.005	-0.005
60	RE41H01	0.025	0.033	0.001	0
61	RE41H02	0.035	0.04	0.011	-0.007
62	RE41H03	0.082	0.092	-0.041	0.045
63	RE41H04	0.045	0.056	0.023	-0.029
64	RE41H05	0.036	0.025	0.006	-0.006
65	RE41H06	0.038	0.041	-0.024	0.022
66	RE41H07	0.046	0.083	0.032	-0.024
67	RE41H08	0.039	0.04	0.002	-0.002
68	RE41H09	0.028	0.043	-0.019	0.018
69	RE41H10	0.037	0.036	-0.002	0.006
70	RE41H11	0.022	0.035	0.006	-0.002
71	RE41H12	0.04	0.07	-0.001	0.008
72	RE41H13	0.032	0.036	0.003	0.001
73	RE41H14	0.029	0.035	-0.006	0.006
74	RE41H15	0.051	0.086	0.013	0.002
75	RE41H16	0.067	0.062	-0.014	0.02
76	RE41I01	0.069	0.057	0.036	-0.033
77	RE41I02	0.048	0.024	0.007	0.002
78	RE41I03	0.05	0.052	-0.018	0.017
79	RE41I04	0.046	0.04	-0.007	-0.003
80	RE41I05	0.056	0.059	-0.024	0.025
81	RE41I06	0.061	0.078	-0.025	0.026
82	RE41I07	0.031	0.045	0.003	-0.018
83	RE41I08	0.042	0.023	-0.003	0.005
84	RE41I09	0.071	0.052	-0.019	0.006
85	RE41I10	0.066	0.066	-0.032	0.032

86	RE4II11	0.065	0.058	-0.021	0.022
87	RE4II12	0.039	0.043	0.012	-0.017
88	RE4II13	0.064	0.055	0.042	-0.032
89	RE4II14	0.056	0.04	-0.001	0.003
90	RE4II15	0.036	0.049	-0.008	0.011
91	RE21K01	0.042	0.04	0.038	-0.051
92	RE21K02	0.03	0.037	0.02	-0.019
93	RE21K04	0.043	0.028	0.014	-0.02
94	RE21K05	0.032	0.033	-0.009	0.004
95	RE21K06	0.082	0.064	-0.025	0.039
96	RE21K07	0.05	0.041	-0.002	-0.002
97	RE21K08	0.06	0.054	-0.013	0.016
98	RE21K09	0.069	0.072	-0.044	0.035
99	RE21K10	0.029	0.049	0.026	-0.019
100	RE21K11	0.104	0.087	-0.079	0.082
101	RE21K12	0.04	0.048	-0.082	0.086
102	RE31M01	0.038	0.025	-0.003	0.004
103	RE31M02	0.052	0.037	0.005	0.003
104	RE31M03	0.104	0.076	-0.042	0.028
105	RE31M04	0.073	0.09	0.035	-0.037
106	RE31M05	0.045	0.058	0.015	-0.026
107	RE31M06	0.061	0.059	-0.008	0.012
108	RE31M07	0.05	0.077	0.019	0.008
109	RE31M08	0.051	0.035	0.027	-0.023
110	RE31M09	0.047	0.042	0.064	-0.059
111	RE31M10	0.06	0.078	-0.011	0.008
112	RE31M11	0.04	0.042	0.027	-0.024
113	RE31M12	0.08	0.048	-0.037	0.039
114	RE31M13	0.047	0.109	-0.008	0.016
115	RE31M14	0.064	0.025	0	0.004
116	RE31M15	0.054	0.052	-0.01	0.009
117	RE31M16	0.031	0.028	-0.011	0.013
118	RE41M01	0.051	0.017	0.005	-0.007
119	RE41M02	0.085	0.075	-0.003	-0.007
120	RE41M03	0.058	0.055	-0.019	0.025
121	RE41M04	0.045	0.04	-0.004	-0.005
122	RE41M05	0.047	0.052	0.019	-0.018
123	RE41M06	0.056	0.034	0	-0.002
124	RE41M07	0.062	0.052	0.006	-0.011
125	RE41M08	0.066	0.074	0.046	-0.043
126	RE41M09	0.035	0.037	-0.021	0.022
127	RE41M10	0.044	0.046	0.03	-0.033
128	RE41M11	0.044	0.037	-0.023	0.021
129	RE41M12	0.066	0.059	0.035	-0.039

130	RE41M13	0.046	0.053	0.03	-0.027
131	RE41M14	0.043	0.048	-0.066	0.052
132	RE41M15	0.096	0.091	-0.044	0.035
133	RE41M16	0.062	0.063	-0.038	0.037
134	RE41M17	0.055	0.053	-0.034	0.026
135	RE41M18	0.063	0.056	-0.043	0.04
136	RE51N01	0.043	0.044	0.004	0.002
137	RE51N03	0.067	0.048	0.027	-0.018
138	RE51N04	0.032	0.056	-0.004	0.007
139	RE51N05	0.068	0.045	-0.035	0.029
140	RE51N07	0.04	0.036	0.002	-0.003
141	RE51N08	0.058	0.04	0.018	-0.02
142	RE51N11	0.035	0.037	-0.012	0.009
143	RE51N12	0.045	0.031	-0.015	0.01
144	RE51N14	0.052	0.047	-0.025	0.025
145	RE51N15	0.024	0.03	-0.016	0.013
146	RE41O01	0.041	0.035	-0.001	-0.001
147	RE41O02	0.032	0.029	-0.005	0.004
148	RE41O03	0.031	0.026	0.014	-0.013
149	RE41O04	0.031	0.046	0.016	-0.016
150	RE41O05	0.034	0.052	-0.004	0.001
151	RE41O06	0.036	0.071	0.022	-0.029
152	RE41O07	0.037	0.043	-0.023	0.025
153	RE41O08	0.062	0.09	0.026	-0.017
154	RE41O09	0.057	0.036	0.005	0.002
155	RE41O10	0.061	0.068	0.051	-0.068
156	RE41O11	0.063	0.056	-0.031	0.036
157	RE41O12	0.057	0.046	-0.034	0.032
158	RE41O13	0.04	0.038	0.001	0.014
159	RE31P01	0.022	0.048	-0.001	0
160	RE31P02	0.043	0.046	0.016	-0.018
161	RE31P03	0.069	0.059	0.061	-0.071
162	RE31P04	0.025	0.021	0.002	0
163	RE31P05	0.035	0.038	-0.024	0.031
164	RE31P06	0.054	0.031	-0.016	0.015
165	RE31P07	0.051	0.046	0.034	-0.036
166	RE31P08	0.056	0.047	-0.028	0.034
167	RE31P09	0.081	0.075	-0.049	0.049
168	RE31P10	0.061	0.091	0.019	-0.003
169	RE31P11	0.049	0.059	-0.066	0.084
170	RE31P12	0.048	0.049	0.028	-0.034
171	RE31P13	0.043	0.075	-0.005	-0.005
172	RE51R01	0.052	0.027	0.015	-0.009
173	RE51R02	0.053	0.071	0.013	-0.026

174	RE51R03	0.055	0.033	0.008	-0.002
175	RE51R04	0.055	0.093	0.027	-0.039
176	RE51R06	0.033	0.097	-0.003	-0.019
177	RE51R07	0.049	0.062	0.026	-0.017
178	RE51R08	0.036	0.051	0.003	-0.014
179	RE51R09	0.053	0.084	0.001	-0.001
180	RE51R10	0.07	0.086	0.046	-0.063
181	RE51R11	0.081	0.111	0.047	-0.044
182	RE51R13	0.046	0.06	-0.022	0.029
183	RE51R14	0.087	0.049	-0.01	0.019
184	RE51R16	0.038	0.063	0.009	-0.007
185	RE51T01	0.032	0.053	0.004	0.002
186	RE51T02	0.053	0.09	-0.006	0.02
187	RE51T03	0.055	0.069	0.008	-0.008
188	RE51T04	0.066	0.045	0.025	-0.022
189	RE51T06	0.044	0.061	-0.013	0.015
190	RE51T07	0.052	0.02	-0.001	-0.001
191	RE51T08	0.039	0.031	-0.014	0.013
192	RE51T09	0.062	0.075	-0.037	0.04
193	RE51T10	0.049	0.038	0.002	-0.017
194	RE51T11	0.053	0.044	-0.044	0.041
195	RE51T12	0.039	0.028	-0.001	0.005
196	RE51T13	0.062	0.051	-0.051	0.046
197	RE51T15	0.061	0.059	0.033	-0.036
198	RE51T16	0.047	0.026	0	0.001
199	RE31U01	0.046	0.063	0.005	-0.004
200	RE31U02	0.034	0.038	0.007	-0.012
201	RE31U03	0.027	0.032	0.001	-0.001
202	RE31U04	0.07	0.085	-0.007	0.018
203	RE31U05	0.058	0.024	0.004	-0.002
204	RE31U06	0.042	0.042	0.005	0.002
205	RE31U07	0.081	0.074	0.033	-0.04
206	RE31U08	0.035	0.043	0.008	-0.011
207	RE31U09	0.073	0.06	0.002	-0.009
208	RE31U10	0.046	0.057	-0.028	0.027
209	RE31U11	0.043	0.081	-0.013	-0.002
210	RE31U13	0.013	0.028	0.002	-0.001
211	RE31U14	0.089	0.096	0.033	-0.037
212	RE31W01	0.035	0.037	0.028	-0.03
213	RE31W02	0.026	0.047	-0.007	0.01
214	RE31W03	0.07	0.022	0.012	-0.011
215	RE31W04	0.038	0.034	0.01	-0.021
216	RE31W05	0.054	0.042	0.015	-0.012
217	RE31W06	0.023	0.036	-0.018	0.02

218	RE31W08	0.063	0.059	-0.042	0.035
219	RE31W09	0.028	0.077	0.009	-0.012
220	RE31W10	0.056	0.058	-0.039	0.042
221	RE31W11	0.036	0.04	-0.023	0.023
222	RE31W12	0.058	0.099	-0.041	0.042
223	RE31W13	0.038	0.037	0.001	0.003
224	RE21Y01	0.047	0.061	-0.019	0.013
225	RE21Y02	0.053	0.025	-0.006	0
226	RE21Y03	0.038	0.054	-0.014	0.011
227	RE21Y04	0.063	0.055	0.005	-0.014
228	RE21Y05	0.058	0.052	-0.036	0.037
229	RE21Y06	0.041	0.069	-0.008	0.003
230	RE21Y07	0.046	0.043	-0.007	0.011
231	RE21Y08	0.044	0.038	-0.02	0.022
232	RE21Y09	0.039	0.042	0.001	0.007
233	RE21Y10	0.038	0.033	-0.02	0.022
234	RE21Y11	0.027	0.019	0	-0.002
235	RE21Y12	0.039	0.051	0.018	-0.008
236	RE21Y13	0.055	0.047	-0.008	0.014
237	RE21Y14	0.046	0.047	-0.038	0.033
238	RE51Z02	0.022	0.057	-0.006	0.01
239	RE51Z03	0.053	0.064	0.016	-0.008
240	RE51Z04	0.041	0.045	-0.005	0.005
241	RE51Z05	0.057	0.034	-0.013	0.004
242	RE51Z06	0.036	0.035	0.013	-0.015
243	RE51Z07	0.04	0.04	-0.023	0.022
244	RE51Z08	0.041	0.063	-0.034	0.034
245	RE51Z09	0.071	0.051	0.029	-0.026
246	RE51Z10	0.042	0.041	0.019	-0.019
247	RE51Z11	0.026	0.025	-0.016	0.019
248	RE51Z12	0.057	0.037	0.033	-0.028
249	RE51Z13	0.051	0.045	0.011	-0.009
250	RE51Z14	0.047	0.053	0.028	-0.047
251	RE51Z15	0.047	0.041	-0.017	0.013
252	E051O01	0.068	0.065	0.005	0.005
253	E051O02	0.04	0.04	-0.01	0.014
254	E051O03	0.058	0.042	0.014	0
255	E051O04	0.048	0.028	-0.009	0.012
256	E051O05	0.033	0.044	-0.015	0.014
257	E051O06	0.052	0.05	0.036	-0.039
258	E051O07	0.05	0.023	0.008	-0.006
259	E051O08	0.03	0.036	0.016	-0.022
260	E051O09	0.044	0.047	0.034	-0.037
261	E051O10	0.026	0.025	0.001	0.003

262	E051O11	0.046	0.056	-0.034	0.031
263	E051O12	0.052	0.05	-0.027	0.03
264	E051O13	0.049	0.04	0.008	0.007
265	E051O14	0.027	0.04	0.005	0.003
266	E051O15	0.044	0.049	0.024	-0.026
267	E051O16	0.055	0.04	-0.02	0.021
268	E051O17	0.03	0.034	0.001	-0.003
269	E051O18	0.039	0.041	0.007	-0.008
270	E041R01	0.037	0.035	0.013	-0.015
271	E041R02	0.046	0.042	0.023	-0.02
272	E041R04	0.057	0.047	-0.002	-0.003
273	E041R05	0.031	0.081	0.014	-0.023
274	E041R06	0.051	0.047	0.019	-0.02
275	E041R08	0.013	0.024	0	0.001
276	E041R09	0.032	0.042	0.005	-0.01
277	E041R10	0.039	0.043	-0.015	0.006
278	E041R11	0.058	0.064	0.002	-0.001
279	E041R12	0.063	0.047	0.01	-0.012
280	E041R13	0.047	0.048	-0.002	-0.002
281	E041R14	0.056	0.038	0.02	-0.018
282	E041R15	0.031	0.028	0.001	0
283	E041R16	0.044	0.073	-0.032	0.039
284	E041T01	0.067	0.08	-0.019	0.019
285	E041T02	0.035	0.039	-0.018	0.021
286	E041T03	0.041	0.042	-0.019	0.017
287	E041T04	0.092	0.086	-0.061	0.068
288	E041T05	0.035	0.043	-0.029	0.027
289	E041T06	0.027	0.032	-0.014	0.014
290	E041T08	0.043	0.054	-0.005	0.004
291	E041T09	0.048	0.037	0.026	-0.026
292	E041T10	0.039	0.044	-0.025	0.02
293	E041T11	0.036	0.039	-0.025	0.021
294	E041T12	0.037	0.027	0	0.006
295	E041T13	0.029	0.029	0.001	0.002
296	E041T14	0.048	0.045	-0.003	-0.01
297	E041T15	0.062	0.039	-0.025	0.025
298	E041T16	0.027	0.024	0.004	-0.005
299	E041T17	0.018	0.025	0.01	-0.007
300	E051V01	0.042	0.047	0.022	-0.021
301	E051V02	0.027	0.022	0.003	-0.005
302	E051V03	0.044	0.036	0.002	-0.004
303	E051V04	0.037	0.035	0.03	-0.029
304	E051V05	0.028	0.027	-0.014	0.013
305	E051V06	0.05	0.045	-0.024	0.029

306	E051V07	0.085	0.051	-0.033	0.035
307	E051V08	0.027	0.063	-0.001	-0.005
308	E051V10	0.034	0.038	-0.001	0.004
309	E051V11	0.044	0.028	0.024	-0.024
310	E051V12	0.041	0.036	0.003	-0.003
311	E051V13	0.039	0.036	0.019	-0.018
312	E051V14	0.056	0.069	0.035	-0.041
313	E051V15	0.043	0.051	0.056	-0.059
314	E051V16	0.03	0.054	0.011	-0.015
315	E051V19A	0.031	0.041	-0.007	0.006
316	E051V20	0.047	0.053	-0.019	0.02
317	E041Z01	0.039	0.038	0.011	-0.012
318	E041Z02	0.052	0.042	0.053	-0.047
319	E041Z03	0.093	0.064	0.048	-0.042
320	E041Z04	0.024	0.038	-0.006	0.008
321	E041Z05	0.028	0.039	-0.011	0.018
322	E041Z06	0.046	0.07	-0.034	0.033
323	E041Z07	0.072	0.048	-0.028	0.026
324	E041Z08	0.064	0.045	-0.001	0.001
325	E041Z09	0.065	0.078	0.058	-0.058
326	E041Z10	0.063	0.045	0.004	-0.001
327	E041Z11	0.055	0.052	0.021	-0.018
328	E041Z12	0.032	0.043	-0.009	0.016
329	E041Z13	0.017	0.037	-0.004	0.004
330	E041Z14	0.046	0.03	-0.029	0.026
331	E041Z15	0.042	0.08	0.017	-0.018
332	E041Z16	0.045	0.034	-0.003	-0.001
333	E041Z17	0.053	0.045	0.021	-0.016
334	E041Z18	0.041	0.053	0.004	-0.003
335	E041Z19	0.04	0.043	0.054	-0.049
336	RE51C01	0.021	0.057	-0.011	0.02
337	RE51C07	0.04	0.043	0.014	-0.013
338	RE51C13	0.052	0.048	-0.042	0.039
339	RE51D11	0.065	0.056	0.008	-0.005
340	RE51D12	0.047	0.039	0.04	-0.053
341	RE41E16	0.067	0.032	0.008	-0.005
342	RE31M17	0.063	0.046	0.067	-0.067
343	RE51N02	0.04	0.056	0.025	-0.014
344	RE51N06	0.044	0.042	-0.014	0.008
345	RE51N09	0.043	0.036	0.022	-0.01
346	RE51N10	0.062	0.055	-0.021	0.015
347	RE51N13	0.088	0.05	-0.049	0.007
348	RE31P14	0.066	0.035	0.001	-0.006
349	RE51R05	0.051	0.033	0.015	-0.007

350	RE51R15	0.032	0.032	-0.001	0.003
351	RE51R17	0.046	0.069	0.013	-0.042
352	RE51T05	0.057	0.047	-0.038	0.043
353	RE51T14	0.072	0.046	-0.015	0.02
354	RE31U12	0.065	0.058	-0.001	0
355	RE31W07	0.046	0.046	-0.047	0.046
356	RE51Z01	0.057	0.053	-0.052	0.051
357	E041R03	0.055	0.068	0.029	-0.025
358	E041R07	0.037	0.037	0.008	-0.007
359	E041T18	0.069	0.067	-0.028	0.028
360	E051V09	0.061	0.058	0.076	-0.076
361	E051V17	0.032	0.046	-0.012	0.023
362	E051V18	0.036	0.04	-0.018	0.013
363	E041Z20	0.027	0.065	-0.006	-0.015