* Section 3-4 FA結果對照解釋  
   根據Table.6-1 的判斷，我們進一步的將X17 機慢車道數量予以移除分析，並留下了最後6個變數進行因素分析，分析方法中也使用了Varimax 旋轉，以最大化Factor loading的方差，從而使factor loading matrix呈現更加簡潔、清晰和解釋性強的結構，結果呈現在Table.6-1；另將所有變數同樣進行factor analysis 的結果放置在Table.6-2加以對照。

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Table.6-1 VARIMAX-Rotated Components Analysis Factor PATTERN Matrix** | | | | | | |
| **Reduced Set of Variables (X1 X3 X5 X7 X9 X11 .X12 X13 X15 X17 deleted)** | | **VARIMAX-ROTATED LOADINGS\*** | | |  | |
| **Factor** | | |
| **1** | **2** | **3** | | **Communality** |
| **X14** | 總計車公里 | .845 |  |  | | .77 |
| **X8** | 大客車數 | .574 |  |  | | .45 |
| **X4** | 里程km |  | -.708 |  | | .52 |
| **X16** | 快車道數量 | .405 | .463 |  | | .42 |
| **X10** | 全聯結車數 |  |  | .573 | | .33 |
| **X6** | 路肩寬度 |  |  | .373 | | .16 |
|  |  |  |  |  | | Total |
| Sum of Squares (eigenvalue) | | 1.21 | 0.89 | 0.55 | | 2.65 |
| Percentage of trace | | 20.2 | 35.0 | 44.5 | | 44.5 |

***\*Factor loadings less than .35 have not been printed and variables have been sorted by loadings on each factor***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Table.6-2 VARIMAX-Rotated Components Analysis Factor Matrix** | | | | | |
|  | | **VARIMAX-ROTATED  LOADINGS** | | |  |
| **Factor** | | |
| **1** | **2** | **3** | **Communality** |
| **X2** | 經度 | -.026 | -.016 | -.011 | .001 |
| **X3** | 緯度 | .015 | .009 | .049 | .003 |
| **X4** | 里程km | -.285 | -.066 | -.120 | .100 |
| **X5** | 路面寬度 | .378 | .115 | .226 | .207 |
| **X6** | 路肩寬度 | .118 | .195 | -.033 | .053 |
| **X7** | 小型車數 | .987 | .143 | -.013 | .996 |
| **X8** | 大客車數 | .626 | -.095 | .377 | .543 |
| **X9** | 大貨車數 | .726 | .520 | -.123 | .812 |
| **X10** | 全聯結車數 | .148 | .807 | -.025 | .674 |
| **X11** | 半聯結車數 | .124 | .989 | .003 | .993 |
| **X12** | 機車數 | .403 | -.251 | .877 | .995 |
| **X13** | 總流量PCU | .941 | .216 | .253 | .997 |
| **X14** | 總計車公里 | .536 | .059 | .315 | .390 |
| **X15** | 尖峰小時交通量PCU | .877 | .189 | .334 | .916 |
| **X16** | 快車道數量 | .481 | .090 | .151 | .263 |
| **X17** | 機慢車道數量 | .060 | -.200 | .264 | .113 |
|  |  |  |  |  | Total |
| Sum of Squares (eigenvalue) | | 4.51 | 2.18 | 1.36 | 8.05 |
| Percentage of trace | | 28.2 | 41.8 | 50.3 | 50.3 |