**Appendix 1**

Mapping of intangible attributes used in this study with intangible complexity related attributes discussed in the literature.

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| --- | --- |
| **Attributes of intangible supply chain complexity used in this paper** | **Related intangible attributes used in the supply chain literature** |
| **Attribute 1:** Communication and monitoring activities with external supply chain partners(e.g. suppliers, customers, distributors, vendor) | * Network arrangement ([Chung et al., 2004](#_ENREF_17)) * Opacity of information sharing ([Ruamsook et al., 2009](#_ENREF_76)) * Increase in comparative price levels ([Ruamsook et al., 2009](#_ENREF_76)) * Describing and demarcating the supply chain ([Carter et al., 2008](#_ENREF_12)) * Time zones ([Subramanian et al., 2015](#_ENREF_86)) * Lack of knowledge ([Jensen, 2011](#_ENREF_48), [Saccani and Perona, 2007](#_ENREF_77)) * Supply risks ([Fredriksson and Jonsson, 2009](#_ENREF_29)) * Criminality and corruption ([Platts and Song, 2010a](#_ENREF_70)) * Cost for exiting legacy assets ([Platts and Song, 2010a](#_ENREF_70)) * Quality problems ([Subramanian et al., 2015](#_ENREF_86)) * Price erosion due to increased competition ([Platts and Song, 2010a](#_ENREF_70)) * Language difference ([Fredriksson and Jonsson, 2009](#_ENREF_29)) * Cultural difference ([Fredriksson and Jonsson, 2009](#_ENREF_29)) * Prioritization of other business initiatives ([Subramanian et al., 2015](#_ENREF_86)) * Complexity of cognition ([Stringfellow et al., 2008](#_ENREF_85)) |
| **Attribute 2:** Policy, regulatory changes, and interaction with regulatory bodies | * Currency risks ([Kotabe and Murray, 2004](#_ENREF_55)) * Intellectual property risks ([Fredriksson and Jonsson, 2009](#_ENREF_29)) * Supply risks ([Fredriksson and Jonsson, 2009](#_ENREF_29)) * Lack of knowledge ([Jensen, 2011](#_ENREF_48), [Saccani and Perona, 2007](#_ENREF_77)) * Rules and laws ([Subramanian et al., 2015](#_ENREF_86)) * Lack of holistic view ([Fredriksson and Jonsson, 2009](#_ENREF_29)) * Different perspectives and ignorance ([Subramanian et al., 2015](#_ENREF_86)) * Volatility in demand ([Springer and Kim, 2010](#_ENREF_83)) * Dynamic customer requirements ([Subramanian et al., 2015](#_ENREF_86)) |
| **Attribute 3:** Communication and monitoring activities with manufacturing plants | * Network arrangement and configuration ([Chung et al., 2004](#_ENREF_17)) * Opacity of information sharing ([Ruamsook et al., 2009](#_ENREF_76)) * Time zones ([Subramanian et al., 2015](#_ENREF_86)) * Quality problems ([Subramanian et al., 2015](#_ENREF_86)) * Lack of knowledge ([Jensen, 2011](#_ENREF_48), [Saccani and Perona, 2007](#_ENREF_77)) * Complexity of cognition ([Stringfellow et al., 2008](#_ENREF_85)) |