



UNITED NATIONS  
DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS  
STATISTICS DIVISION  
ECONOMIC STATISTICS BRANCH

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## **Correspondence between CPC Ver. 2.1 and HS 2017**

The correspondence between CPC Ver. 2.1 and HS 2017 was prepared by the United Nations Statistics Division to facilitate the data conversion between these classifications. CPC Ver. 2.1 was published in 2015 and contained the correspondence with HS 2012. However, in 2017 the World Customs Organization (WCO) issued a new version of HS, HS 2017, and there has been a growing need for a correspondence table between CPC Ver. 2.1 and HS 2017.

This note describes the methodology used by UNSD to build and validate the correspondence table between CPC Ver. 2.1 and HS 2017. This correspondence is available the UNSD classifications website at <https://unstats.un.org/unsd/classifications/econ>

### **1. Previously existing correspondence tables**

The starting points for the development of the correspondence table between CPC Ver. 2.1 and HS 2017 are the following two correspondence tables: the correspondence table between CPC Ver.2.1 and HS 2012, and the correspondence table between HS 2012 and HS 2017. These are described below.

#### **CPC Ver. 2.1 – HS 2012 correspondences**

When CPC Ver. 2.1 was published in 2015, it contained the correspondence table between transportable goods (as defined in sections 0 to 4 of CPC) and HS 2012. The publication includes the correspondences between CPC Ver. 2.1 and HS 2012 at the most detailed level, in the format of code pairs between CPC 5-digit subclasses and HS 6-digit codes (subheadings). For example, CPC Ver. 2.1 code 01111 (Wheat, seed) corresponds to HS 2012 codes 1001.11 (Cereals; wheat and meslin, durum wheat, seed) and 1001.91 (Cereals; wheat and meslin, other than durum wheat, seed).<sup>1</sup>

#### **HS 2012 – HS2017 correspondences**

When each new version of HS is issued, the World Customs Organization (WCO), as its custodian, provides correspondences (also called “correlation tables”) between the new version and the preceding version. The correspondence (correlation table) between HS 2012 and HS

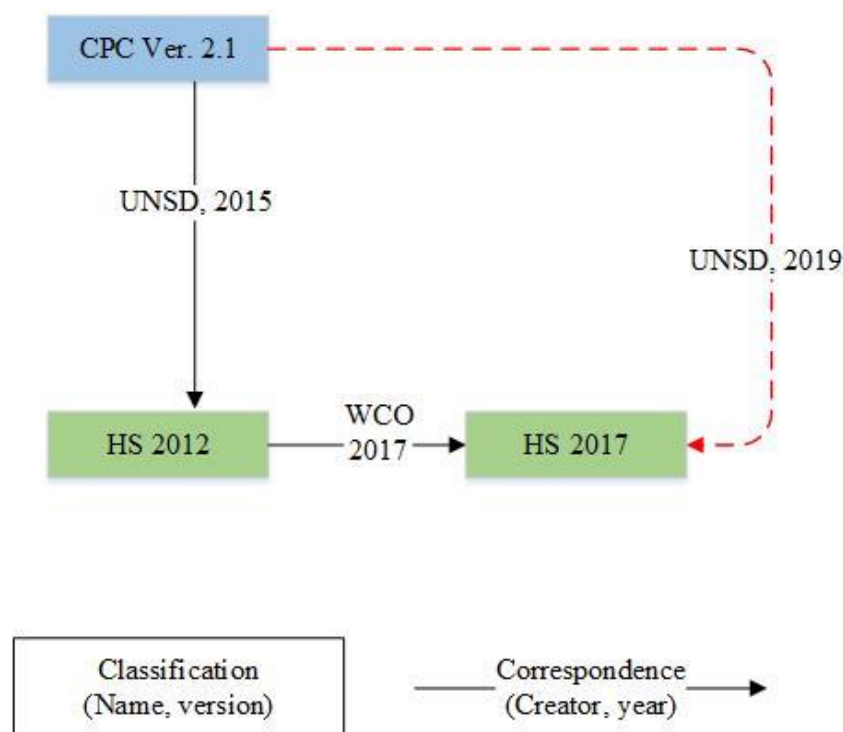
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<sup>1</sup> CPC Ver. 2.1, p. 31. Please note that the heading on this page (and on subsequent pages) should be HS 2012, not HS 2007.

2017 by WCO was therefore used to build the correspondence between CPC Ver. 2.1. and HS 2017.

The relationship of the existing correspondence tables as discussed above is shown in Figure 1.

**Figure 1 Correspondences between CPC Ver. 2.1 and HS 2012/2017**



## 2. General description of building methodology

The correspondence between CPC Ver. 2.1 and HS 2017 was developed by linking the two existing correspondence tables, namely:

- CPC Ver. 2.1 and HS 2012
- HS 2012 and HS 2017

The outcome of this linking process is therefore a paired list of codes which explains where a category of one classification is found in the other classification. In addition, an indicator is associated to each category of the classification to indicate the type of relationship with the other classification. The indicator takes value “0” when the category of one classification is linked to only one category in the other classification. The indicator takes value “1” when the category of one classification is linked to multiple categories in the other classification.

The types of relationships between the classifications can therefore be: 1:1 (when there is a complete match between two categories, one in each classification); 1:n (when a category of one classification is linked to multiple categories of the other classification); n:1 (when multiple categories of one classification are linked to one category of the other classification); and n:n

(when multiple categories of one classifications are linked to multiple categories of the other classification).

A combination of the two columns of indicators helps establish the logical relationship between the codes, as shown in Figure 2:

**Figure 2 Types of relationship between CPC Ver. 2.1 and HS 2017 codes**

Indicator values	Relationship	Number of correspondences, in code pairs
CPC 0, HS 0	1:1	539
CPC 0, HS 1	n:1	117
CPC 1, HS 0	1:n	4,592
CPC 1, HS 1	n:n	595
<b>Total</b>		<b>5,843</b>

### 3. Validation of results

A preliminary correspondence table between CPC Ver. 2.1 and HS 2017 was obtained by linking the correspondence from CPC Ver. 2.1 to HS 2012 and then from HS 2012 to HS 2017. The result was then checked for possible errors. The three types of validation measures used are described below.

#### 3.1 Checks for duplicates

The same correspondence (duplicate HS and CPC code pairs) might appear multiple times in the preliminary correspondence table. These duplicates were removed, because their presence might affect the indicators on the type of relationship.

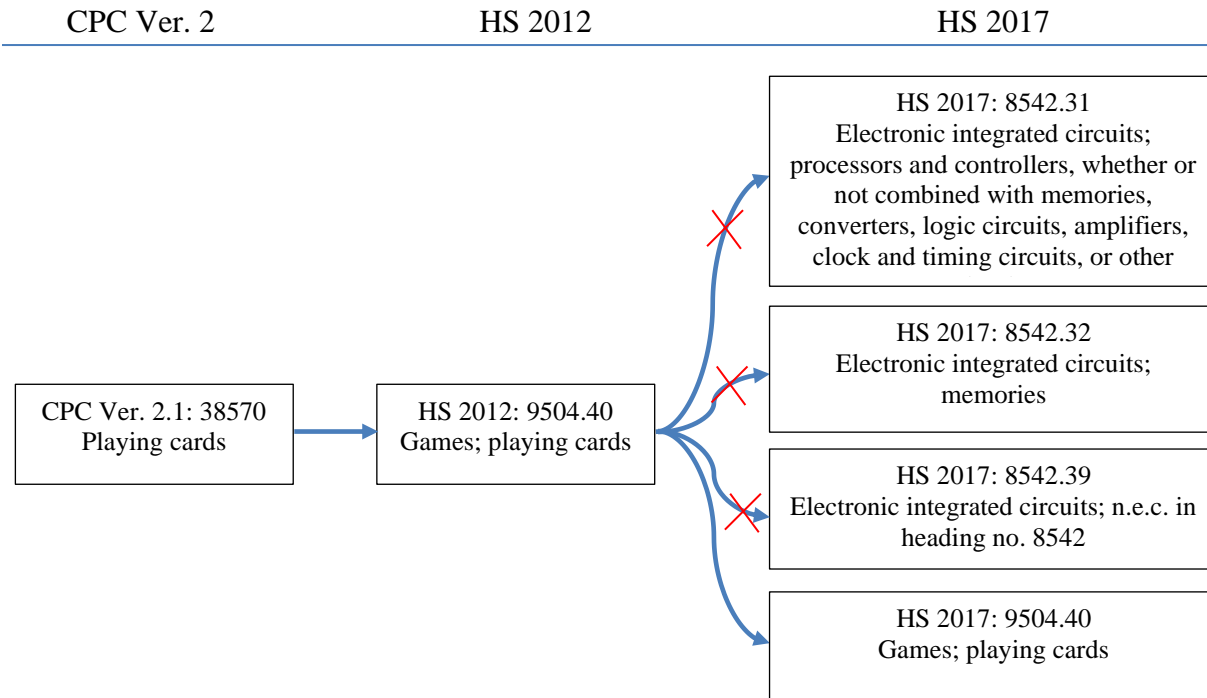
#### 3.2 Checks for inconsistencies of code definitions

Inconsistencies between the categories of the two classifications may arise by just linking together the correspondences between CPC Ver. 2.1 and HS 2012 and HS 2012 and HS 2017. This may be due to two main reasons: (1) HS 2012 codes are split in HS 2017; and (2) the expansion of the scope of the HS heading 85.42 to include multi-component integrated circuits (MCOs).

A detailed review of the correspondence was carried out for the following set of codes to ensure that the description of the codes was correct: all correspondences involving codes that have changed between HS 2012 and HS 2017; all correspondences with n:n relationship; and a random sample of the rest of the correspondences. Any correspondence that was considered incorrect was removed.

An example of inconsistent correspondence in the preliminary correspondence table is for the CPC Ver. 2.1 code 38570 (Playing cards). the CPC Ver. 2.1 code 38570 corresponds to HS 2012 code 9504.40, which in turn correlates to HS 2017 codes 8542.31, 8542.32, 8542.39 and 9504.40. The first three codes do not seem relevant and therefore removed.

The final correspondence between CPC Ver. 2.1 and HS 2017 for CPC Ver. 2.1 code 38570 (Playing cards) is therefore just HS 2017 9504.40. This is shown schematically below.



Once the inconsistencies were removed, the indicators of type of relationship was regenerated. Please refer to the next section for a complete list of the removed correspondences.

### 3.3 Checks for omissions

A final check on the correspondence was done to guarantee that all the codes in either classifications were included in the final correspondence table. No cases of omitted categories either in CPC ver. 2.1 or HS 2017 were found.

## 4. Summary of issues

During the validation process as previously mentioned, the following issues were noticed, and appropriate actions were taken. These issues are listed below:

HS 2017 code	CPC Ver. 2.1 code	Issue
0301.93	04221	Split code from HS 2012: 0301.99 to HS 2017: 0301.99 and ex0301.93
0301.93	04222	...
0301.93	04231	...
0301.93	04232	...
0301.93	04241	...

0301.93	04242	...
0301.93	04251	...
0301.93	04252	...
0301.93	04261	...
0301.93	04262	...
0302.73	04261	Split code from HS 2012: 0302.89 to HS 2017: 0302.49/73/89/99
0302.73	04262	...
0302.73	04291	...
0302.73	04292	...
0303.25	21216	Split code from HS 2012: 0303.89 to HS 2017: ex0303.25, 0303.59, ex0303.89, and ex0303.99
1211.20	21499	Split code from HS 2012: 2008.99 to HS 2017: 2008.99 and ex1211.20/90
1211.30	03250	Split code from HS 2012: 1404.90 to HS 2017: 1211.30/40/50/90
1211.40	03250	...
1211.50	03250	...
1211.90	03250	...
1211.90	21499	Split code from HS 2012: 2008.99 to HS 2017: 2008.99 and ex1211.20/90
4801.00	32129	Split code from HS 2012:4801.61/62 to HS 2017:4801.61/62 and ex4801.00
8528.42	47314	Split of HS 2012: 8528.49 to HS 2017: ex8528.42 and 8528.49
8528.52	47314	Split of HS 2012: 8528.59 to ex8528.62 and 8528.59
8542.31	38570	MCO issue (detailed discussion at <a href="https://unstats.un.org/unsd/classifications/Econ/corr-notes/HS2017%20conversion%20to%20earlier%20HS%20versions%20and%20other%20classifications.pdf#page=9">https://unstats.un.org/unsd/classifications/Econ/corr-notes/HS2017%20conversion%20to%20earlier%20HS%20versions%20and%20other%20classifications.pdf#page=9</a> )
8542.31	38581	...
8542.31	38582	...
8542.31	38590	...
8542.31	39380	...
8542.31	43570	...
8542.31	43580	...
8542.31	43921	...
8542.31	43934	...
8542.31	43935	...
8542.31	43943	...
8542.31	43944	...
8542.31	44251	...

8542.31	44252	...
8542.31	44429	...
8542.31	44461	...
8542.31	44622	...
8542.31	44629	...
8542.31	44640	...
8542.31	44740	...
8542.31	44760	...
8542.31	44812	...
8542.31	44914	...
8542.31	44917	...
8542.31	44922	...
8542.31	45150	...
8542.31	45170	...
8542.31	45180	...
8542.31	45263	...
8542.31	45264	...
8542.31	45265	...
8542.31	45266	...
8542.31	45281	...
8542.31	45290	...
8542.31	46121	...
8542.31	46122	...
8542.31	46132	...
8542.31	46211	...
8542.31	46212	...
8542.31	46213	...
8542.31	46214	...
8542.31	46215	...
8542.31	46220	...
8542.31	46921	...
8542.31	46929	...
8542.31	46939	...
8542.31	46960	...
8542.31	47221	...
8542.31	47222	...
8542.31	47223	...
8542.31	47330	...
8542.31	47401	...
8542.31	47402	...
8542.31	47403	...

8542.31	48241	...
8542.31	48242	...
8542.31	48243	...
8542.31	48244	...
8542.31	48249	...
8542.31	48251	...
8542.31	48252	...
8542.31	48266	...
8542.31	48269	...
8542.31	48281	...
8542.31	48284	...
8542.32	38570	...
8542.32	38581	...
8542.32	38582	...
8542.32	38590	...
8542.32	39380	...
8542.32	43570	...
8542.32	43580	...
8542.32	43921	...
8542.32	43934	...
8542.32	43935	...
8542.32	43943	...
8542.32	43944	...
8542.32	44251	...
8542.32	44252	...
8542.32	44429	...
8542.32	44461	...
8542.32	44622	...
8542.32	44629	...
8542.32	44640	...
8542.32	44740	...
8542.32	44760	...
8542.32	44812	...
8542.32	44914	...
8542.32	44917	...
8542.32	44922	...
8542.32	45150	...
8542.32	45170	...
8542.32	45180	...
8542.32	45263	...
8542.32	45264	...

8542.32	45265	...
8542.32	45266	...
8542.32	45281	...
8542.32	45290	...
8542.32	46121	...
8542.32	46122	...
8542.32	46132	...
8542.32	46211	...
8542.32	46212	...
8542.32	46213	...
8542.32	46214	...
8542.32	46215	...
8542.32	46220	...
8542.32	46921	...
8542.32	46929	...
8542.32	46939	...
8542.32	46960	...
8542.32	47221	...
8542.32	47222	...
8542.32	47223	...
8542.32	47330	...
8542.32	47401	...
8542.32	47402	...
8542.32	47403	...
8542.32	48241	...
8542.32	48242	...
8542.32	48243	...
8542.32	48244	...
8542.32	48249	...
8542.32	48251	...
8542.32	48252	...
8542.32	48266	...
8542.32	48269	...
8542.32	48281	...
8542.32	48284	...
8542.33	39380	...
8542.33	45281	...
8542.33	46121	...
8542.33	46122	...
8542.33	46132	...
8542.33	46211	...



8542.33	46212	...
8542.33	46213	...
8542.33	46214	...
8542.33	46215	...
8542.33	46220	...
8542.33	46921	...
8542.33	46929	...
8542.33	46939	...
8542.33	46960	...
8542.33	47221	...
8542.33	47222	...
8542.33	47223	...
8542.33	47330	...
8542.33	47401	...
8542.33	47402	...
8542.33	47403	...
8542.39	38570	...
8542.39	38581	...
8542.39	38582	...
8542.39	38590	...
8542.39	39380	...
8542.39	43570	...
8542.39	43580	...
8542.39	43921	...
8542.39	43934	...
8542.39	43935	...
8542.39	43943	...
8542.39	43944	...
8542.39	44251	...
8542.39	44252	...
8542.39	44429	...
8542.39	44461	...
8542.39	44622	...
8542.39	44629	...
8542.39	44640	...
8542.39	44740	...
8542.39	44760	...
8542.39	44812	...
8542.39	44914	...
8542.39	44917	...
8542.39	44922	...

8542.39	45150	...
8542.39	45170	...
8542.39	45180	...
8542.39	45263	...
8542.39	45264	...
8542.39	45265	...
8542.39	45266	...
8542.39	45281	...
8542.39	45290	...
8542.39	46121	...
8542.39	46122	...
8542.39	46132	...
8542.39	46211	...
8542.39	46212	...
8542.39	46213	...
8542.39	46214	...
8542.39	46215	...
8542.39	46220	...
8542.39	46921	...
8542.39	46929	...
8542.39	46939	...
8542.39	46960	...
8542.39	47221	...
8542.39	47222	...
8542.39	47223	...
8542.39	47330	...
8542.39	47401	...
8542.39	47402	...
8542.39	47403	...
8542.39	48241	...
8542.39	48242	...
8542.39	48243	...
8542.39	48244	...
8542.39	48249	...
8542.39	48251	...
8542.39	48252	...
8542.39	48266	...
8542.39	48269	...
8542.39	48281	...
8542.39	48284	...

9406.10	38702	Split code from HS 2012: 9406.00 to HS 2017: 9406.10/90
9406.10	38703	...
9406.10	38704	...
9406.90	38701	...

UNSD considered all the correspondences listed above as incorrect, and deleted them accordingly.

**5. Feedback**

The correspondence table between CPC Ver. 2.1 – HS 2017 will be published on the UNSD classifications website at: <https://unstats.un.org/unsd/classifications/Econ> Under the heading “CPC Correspondence Tables”.

The correspondence table is published as a comma delimited CSV text file, which can be easily loaded into most data analysis tools. The file contain four columns: “CPC ver 2.1 code”, “CPC Ver. 2.1 relationship indicator”, “HS 2017 code”, and “HS 2017 relationship indicator”. Inquiries and suggestions can be sent to the Classifications Hotline at [chl@un.org](mailto:chl@un.org).